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ABSTRACT

New standards set by the National Council for Accreditaton of Teacher Education (NCATE) focus on unit, rather than program, acccreditation. The unit is the body within an institution that is primarily responsible for the preparation of teachers and other educational personnel. Units are required to focus on the knowledge bases pertinent to professional preparation and to focus on the world of professional practice. This monograph has the following purposes, to: (1) state the rationale for knowledge based curricula for teacher education; (2) describe the kinds of knowledge necessary; (3) clarify and illuminate the NCATE standards; (4) describe various institutional stategies for compliance with the standards; and (5) provoke discussion on considerations basic to teacher education programs. Chapter 1 addresses the rationale for knowledge as a base for program definition and evolution in teacher education. The second chapter considers different kinds of knowledge that inform the design, development, and delivery of teacher education. Chapter 3 is an interpretive treatment of NCATE's knowledge base and related standards. The final chapter describes strategies and tactics that units might use to meet the knowledge base standards. Appended are other NCATE themes, knowledge base exercises, a prospectus for the beginning teacher, and NCATE standards. (JD)

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RELATING KNOWLEDGE TO TEACHER EDUCATION

RESPONDING TO NCATE'S KNOWLEDGE BASE AND RELATED STANDARDS

HENDRIK D. GIDEONSE

American Association of Colleges for Teacher Education

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RELATING KNOWLEDGE TO TEACHER EDUCATION

RESPONDING TO NCATE'S KNOWLEDGE BASE AND RELATED STANDARDS

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American Association of Colleges for Teacher Education
January 1989

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FOREWORD

The challenges posed by new accreditation standards in teacher education are quite different from those of other professions. Rather than defining minimums that constitute accepted or acceptable norms of practice, standards of the National Council for Accreditation of Teacher Education (NCATE) require that the individual unit exercise a first responsibility by describing its perspective on excellence in professional practice. In so doing, the unit must defend the rationale, process, and outcomes associated with its own approach. One of the results is an impetus for institutions to address "state of the art" conceptions of professional excellence, a focus particularly evident in standards on the knowledge base. Another and equally significant consequence of this approach is a challenge for the unit to address the standards through a continuing process of deliberation among its faculty.

It is the critical role of professional dialogue established through faculty collaboration, as well as dispositions toward the knowledge bases, that become unifying themes in this monograph. The commitment to knowledge is an invitation for debate within the faculty of education, for continuous change, and for "risks and opportunities of the exercise of judgment," concludes the author in chapter 1. This statement becomes explicit in the final section ("What Can Units Do?") and accompanying exercises that presume a collaborative approach to unit consensus on the knowledge bases.

Within such a context, the American Association of Colleges for Teacher Education presents this volume as a vehicle for institutions that are addressing the reform of teacher education programs in serious ways, an effort for which both the NCATE standards and the discussion by Hendrik Gideonse can serve as a guide. Readers will encounter topics familiar as "current issues" in teacher education, including some that are prominent on this Association's professional development agenda; examples of such topics are the link between higher education units and P-12 practitioners, as well as emphasis on incorporating current research into teacher education programs. Yet, the intent in presenting this publication is less to advance particular issues than to assist institutions in assuming responsibility to develop and pursue that agenda—both in preparing their own students and in participating in a broadly based national dialogue. In the process it is likely that both deans and faculty will find themselves taking on new roles. It is also to be hoped that enhanced dialogue within the profession will carry with it higher standards and an expansion of the knowledge base itself.

EUGENE E. EUBANKS
AACTE PRESIDENT

November 1988

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ABOUT THE AUTHOR

Hendrik D. Gideonse is University Professor of Education and Policy Science at the University of Cincinnati in Ohio. Between 1965 and 1971, he was Director of Planning and Evaluation for the research programs of the U.S. Office of Education. Between 1972 and 1986, he served as Dean of the College of Education at the University of Cincinnati. In 1983-84, he served as President of the Association of Colleges and Schools of Education in State Universities and Land-Grant Colleges and Affiliated Private Universities. He currently serves as a member of the Unit Accreditation Board of the National Council for Accreditation of Teacher Education, and he has been a staff member of AACTE's Knowledge Base Workshops and NCATE's Board of Examiners' training sessions.

INTRODUCTION

Across America, institutions seeking accreditation by the National Council for Accreditation of Teacher Education (NCATE) are carefully examining the revised standards. They are asking questions such as: What do the standards mean? What do they require of teacher education units? How can institutions respond to the challenges of the standards?

The new standards embrace three strategic considerations:

1. They focus on *unit, not program, accreditation*. The unit is "the college, school, department, or other administrative body within the institution that is primarily responsible for the preparation of teachers and other professional education personnel."[1]

2. They oblige units to focus on the *knowledge bases* pertinent to professional preparation for education.

3. They oblige units to focus on the *world of professional practice*.

As institutions orient themselves to the new NCATE standards, they have begun to seek help. NCATE and the American Association of Colleges for Teacher Education (AACTE) have sponsored seminars where teacher educators receive and deliberate over advice on how to proceed. NCATE's programs have been aimed at comprehensive orientation to the new standards and the preparation and review processes associated with the overall redesign. AACTE's workshops complement NCATE's by focusing on the knowledge bases for teacher preparation. During the orientations and workshops, participants expressed an intense and often anxious need for assistance in interpreting the standards, especially those concerned with the knowledge bases.

WHAT DOES THIS MONOGRAPH REPRESENT?

Portions of this monograph initially were responses to several assignments given to me in connection with the aforementioned seminars. With each new experience, I became more convinced that it would be useful to share the material more widely with teacher educators.

The purposes of this monograph, therefore, are

- to state the rationale for knowledge based curricula for teacher education;
- to describe the kinds of knowledge necessary;
- to clarify and illuminate the NCATE standards;
- to describe various institutional strategies for compliance with the standards; and

- to provoke discussion on considerations basic to teacher education programs.

Several caveats should be stated at the outset, however:

1. While this monograph is only one person's view, it is the view of one who has been deeply involved in the knowledge base movement locally and nationally. It is meant to be a stimulus to further reflection and dialogue. No single individual can provide answers on such matters that units could, as it were, "slip on" like a ready-made jacket. No greater caution can be made than to warn institutions against trying to meet NCATE's knowledge base standards by drafting suitable "paper covers" to dress up and justify, after the fact, programs constructed and operated on principles other than those constituting teacher education's knowledge bases.

2. The treatment accorded the different standards is uneven in thoroughness. This is partly happenstance and partly deliberate.

The happenstance part owes to the fact that it is the work of one person who, given the scope of the concerns addressed, could not treat all of them equally. Additionally, areas receiving more intensive treatment are a function of specific requests made in connection with preparation for the seminars.

The unevenness is partly deliberate, however. Not trying to do everything equally thoroughly, even if there were sufficient time, experience, and capacity, seemed a reasonable approach to assure that the monograph would stimulate reflection and dialogue.

3. The concern about knowledge bases within teacher education sometimes seems almost an obsession. Few professions exhibit the degree of self-consciousness about such matters that teacher education does. The discomforts some of us clearly feel, however, are matched by the condescension with which others approach these matters. Few are neutral in the debate. Indeed, the very preparation of a monograph such as this one places me squarely among the advocates of a knowledge based approach, but the advocacy is tempered by a willingness to see its specifics replaced by formulations of even greater intellectual power and sophistication.

4. The knowledge bases for teacher education are undergoing constant change. Only with great caution, therefore, should they be codified at any given point in time. Perhaps this monograph should be seen as having been written in "disappearing ink."[2]

ORGANIZATION

This paper has four major chapters. Chapter 1 addresses the rationale for knowledge as a basis for program definition and evolution in teacher education. Chapter 2 considers different kinds of knowledge that inform the design, development, and delivery of teacher education. Chapter 3 is an interpretive treatment of NCATE's knowledge base and related standards. Chapter 4 describes strategies and tactics that units might use to meet the knowledge base standards.

NOTES

1. *National Council for the Accreditation of Teacher Education Standards, Procedures, and Policies for the Accreditation of Professional Education Units* (Washington, D.C.: NCATE, 1987), p.35.
2. The metaphor is not an original one. At a 1964 working session for preparing guides to be used by those who would shortly be setting up local Head Start programs, J. McVicker Hunt made the same observation. On the one hand, he said, the knowledge about child development was undergoing constant change; on the other, what Head Start as a whole would learn through its attempts at implementation would prove invaluable for succeeding rounds of program development. The disappearing ink caveat is an observation with equal merit in the present instance.

CHAPTER
1

The Rationale for Knowledge as a Basis for Program Definition and Evolution in Teacher Education

AACTE's early 1987 request that I focus my attention on the rationale for knowledge as a basis for program definition and evolution in teacher education initially struck me as a somewhat unexceptionable idea. To address the *rationale* at that point struck me as a retracing of the steps teacher education supposedly had already taken, for hadn't many of us joined together under George Denemark's leadership and stimulus to rewrite the NCATE standards to relate units more directly and purposefully to knowledge bases informing their programs and practice? In effect, had we not answered any possible questions about the rationale for doing so with a firm yes?

So it appeared, at first. After a while, however, my reexamination of several "classic texts" pertaining to knowledge bases for teacher education, coupled with an essentially parallel (but closely related) monitoring of the critical reaction to the Holmes Group proposals, led me to two realizations.

1. Little formal attention has been given to the rationale for basing teacher education programs on knowledge.

2. Controversy exists respecting even the concept of knowledge bases.

Let me illustrate these two points.

Smith's *A Design for a School of Pedagogy* boldly criticizes earlier studies of teacher education for their "failure to give primary consideration to the knowledge base for pedagogical education."[1]

AACTE's own publication on knowledge bases, *Essential Knowledge for Beginning Educators*, *presumes* the question of rationale.[2] Only Smith's closing essay treats that question, but even it focuses more on evolutionary changes in the weight given to theoretical and clinical knowledge in teaching and teacher education than on the generic issues associated with the proposition that knowledge ought to underpin the conceptualization of professional preparation programs in education.

Handbook of Teaching and Policy,[3] edited by Sykes and Shulman, two widely acknowledged proponents of acting on the basis of what is known, contains no index citation for knowledge or any related term. The basic assumption underlying the volume is that knowledge can impact on policy and practice (the editors write about the "family resemblance" between their volume and "a definitive, comprehensive, up-to-date review of knowledge on a [usually] well-bounded subject").[4] Shulman's contribution to the volume does touch directly on the issue, but still it was not indexed.[5]

Controversy about the concept of knowledge bases is evident in Jackson's recent commentary, significantly titled "Facing Our Ignorance,"[6] which criticizes the Holmes Group's *Tomorrow's Teachers* for its "unwarranted boasts" of how much is known. Based on spirited personal conversation with Jackson, I can say that his article tactfully understates the intensity of his belief that we should "do away with talk of a knowledge base for teaching."[7] Rosenshine (one of the persons closely associated with the codification of elements of the knowledge base for teaching),[8] again in personal conversation,[9] rejects the notion that much of a knowledge base for teaching and teacher education exists!

Why should rationale be unattended to, confusing, or fraught with controversy? I concluded that the rationale for linking knowledge bases to program change in teacher education did, indeed, merit consideration.

I have organized my discussion in this chapter into four sections. The first sketches *four ways of organizing thinking about knowledge bases*. The second considers a variety of ways of thinking about *what it means to know*. A third part explores *what it might mean to apply knowledge* to teacher education programs. A concluding section *summarizes and restates an emergent rationale* for linking knowledge bases to teacher education programs.

CONCEPTUALIZATIONS OF KNOWLEDGE BASES

Knowledge pertinent to teacher education programs can be conceptualized in several different ways. Those differences themselves suggest some of the confusion that arises in discussions about knowledge bases for teacher education. There is no one right way to develop frameworks for thinking about such matters. Each approach serves different purposes and responds to different stakeholder orientations.

One can think of organizing knowledge, for example, in terms of the classical topical categories of teacher education, such as:

Curriculum

Instruction

Classroom and behavior management

Individual differences

Psychological

Sociological

Cultural

Measurement and evaluation

Organization and support of schools

Intellectual foundations of professional practice

Liberal/general education foundations

Subject matter

Readers will recognize this listing as a formulation of traditional curricular categories for professional preparation in education that can be found in the curriculum literature of teacher education, state program approval standards, and NCATE's knowledge base standards.

An alternate way of categorizing knowledge references the research domains from which professional knowledge emerges. Virginia Koehler's introduction to *Essential Knowledge for Beginning Educators*, for example, references six:

Effective teaching

The language of the classroom

Teacher planning and decision-making research

The effects of context on teaching

Effective schools research

Research on reading, writing, and mathematics learning[10]

Other research domains could, no doubt, be listed. For example, one could speak about the contribution to professional education of the traditional academic disciplines.[11]

Many teacher educators employ yet a third framework for thinking about knowledge bases. Such frameworks are more "personological"in that they derive their meaning from the names of researchers and scholars that the holder associates with the development of knowledge pertinent to professional preparation. While each person's lists will vary, the tendency of many of us to think of research and scholarship in terms of its performers reflects the reality of idiosyncratic affinities felt by individuals as they encounter the community of scholars. My list, for example, includes:

Richard Anderson	Thomas Good	James Popham
Benjamin Bloom	Edmund Gordon	James Raths

Jere Brophy	Gary Griffin	Barak Rosenshine
Courtney Cazden	Gene Hall	Israel Scheffler
Christopher Clark	Willis Hawley	Lee Shulman
Ron Edmonds	Philip Jackson	B. Othanel Smith
Walter Doyle	Lilian Katz	Jane Stallings
Carolyn Evertson	David Krathwohl	Alan Tom
Sharon Feiman-Nemser	Judith Lanier	Ralph Tyler
Gary Fenstermacher	Ann Lieberman	Beatrice Ward
Nathan Gage	Sarah Lightfoot	Robert Yinger
Robert Gagne	Marlaine Lockheed	Kenneth Zeichner

Each of us will add and delete, and that is part of the meaning and, therefore, the importance of recognizing the presence of this phenomenon.

Although at first blush, thinking of knowledge bases in terms of researchers and scholars may seem a bit odd, doing so both implies and captures the social nature of inquiry. It reminds us that the development and affirmation of academic, scholarly, and scientific knowledge occurs within networks and invisible "colleges"—a social reality that may explain much about who knows about, is comfortable with, and may be likely, therefore, to act on the products of research and scholarship.[12]

A fourth way of conceptualizing knowledge bases, particularly about teaching, is suggested in Shulman's lead chapter in the *Handbook of Research on Teaching*. Beginning with a discussion of paradigms, Shulman reviews the somewhat weaker phenomena for organizing research that he calls "grand strategies," that is, programs of research, as contrasted to individual, one-shot investigations. Shulman identifies five:

Process-product research

Time and learning

Pupil cognition and the mediation of teaching

Classroom ecology

Teacher cognition and decision making

Each of these programs makes different choices among alternative units of inquiry, including participants, attributes, context, content, agenda, and research perspective. As Shulman observes, "these choices resulted in strikingly different research programs, and hence strikingly different narratives about teaching, its antecedents and consequences."[13]

Zeichner suggests yet a fifth way of organizing knowledge for teaching. He identifies four paradigms of teacher education that have dominated debates in recent years: behavioristic, personalistic, traditional-craft, and inquiry oriented. Each paradigm is seen as held together by a set of common

assumptions that distinguishes its basic goals from those of another. In his analysis of the four paradigms, Zeichner notes that each differs in the extent to which it represents the belief that teacher education curricula can be specified in advance and the extent "to which a conception of teacher education views the institutional form and social context of schooling as problematic."[14] Competing paradigmatic conceptualizations of this kind provide organizing principles on the basis of which research and scholarship are perceived to be relevant and, if so, what place both hold in the larger scheme of things.

These ways of categorizing knowledge base content do not exhaust the potential frames that might be applied. There are certainly other dimensions—for example, the functions of teachers in terms of which knowledge bases can be described. But the exercise lends order to an otherwise rich but unruly melange; the discovery of different frames suggests why considering knowledge bases for teacher education is sometimes overwhelming.

WHAT DOES IT MEAN TO KNOW?

Part of the discomfort we feel as we seek to link teacher education programs to knowledge arises from our uncertainty over what we mean by the claim to knowledge.

This question addresses epistemology. Consider the differences and similarities among the following verbs:

know	judge	opine
believe	decide	intuit
accept	guess	assert

The importance of words like these lies in the way they help us think about purpose, program design, and instructional delivery. Is purpose something we know? Of course. (Or, at least, it ought to be!) If knowledge contributes to the definition of purpose, to what extent does purpose represent something we decide or accept or believe rather than something we "find out" through formal inquiry? What is the difference, professionally, in *knowing* something and *believing* something? In what sense are guessing and judging similar and in what ways are they different? Under what circumstances can professionals employ either? Where is it permissible to have an opinion or act on intuition, and where must we flatly proscribe such practices?

Differences exist among these terms. Those differences have to do with the nature of evidence:

- expectations for and accessibility of evidence;

- individualistic or personal frames of reference, as contrasted to collective or collegial;
- degree of certainty or conviction; and
- legitimacy.

The claim of knowledge clearly implies evidence, but evidence is not necessarily requisite for opinion, belief, or decision. Knowledge implies, but need not require, acceptance that reaches beyond the perceptions of a single individual. Knowledge implies evidence, convincing not only to oneself, but also to others. Tentativeness and caution are associated with guessing or intuition, whereas knowledge conveys greater conviction and certainty. Guessing or intuition may be legitimately employed in rapidly unfolding circumstances, but would be indefensible as a basis for making a deliberate decision, for example, on program design or framing admission, selective retention, or graduation guidelines. Assertions are claims whose legitimacy may finally depend on evidence but whose actual force may equally well rest on the numbers of people associated with them or the real powers or prerogatives of their adherents.

Sources of Knowledge

Consideration of what it means to know is enriched by attending to the sources of knowledge pertinent to teaching and teacher education. Those sources might include:

- Experimental research (for example, Brophy, Good and Grouws, or Evertson)
- Authority (for example, Gage's *The Scientific Basis for the Art of Teaching*)[15]
- Observation ("I saw this done and it works.")
- Personal experience ("It worked for me.")
- Collective experience or wisdom of practice (for example, Shulman's work for the National Board for Professional Teaching Standards)
- Logic (For example, if the norms and attitudes children bring to school are important for their learning, and if different cultural groups display differing norms and attitudes, then teachers should know about the norms and attitudes of the different cultural groups who send their children to schools.)

- Second-order scholarship (for example, the chapters in the *Handbook of Research on Teaching*)[16]
- Design (For example, something is known because it is designed, constructed, tested, and revised until it achieves its purpose—that is, it undergoes systematic development.)
- Imagination (the process of conceiving of something not present to the senses or never before wholly perceived in reality.)
- Revelation (For example, the kinds of claims made in certain Christian schools or on graffiti boards in response to rhetorical professional questions [e.g., "God said..."or "It is written in the Bible that..."]. Most of the examples of revelation as a source of knowledge tend to be mediated by an authority reference.)[17]
- Intuition (e.g., Jackson's descriptions of experienced teachers' sources of insight into practical problems in classrooms)[18]

Commitment to linking pertinent knowledge bases to teaching and teacher education requires choices among these different sources of knowledge. They are listed because it is difficult to choose until we are fully aware of the sources that we, in fact, employ.

The Social or Collegial Nature of Knowledge

Consider the differences in the following propositions:

I know

Teachers know

Teacher educators know

The profession knows

Scholars know

Our students know

Our unit knows

The faculty know

Members of NCATE's Board of Examiners know

It is known

Each of these statements is different and has different referents. Each implies different meanings of what it means to know. None is easily interchangeable with the others. Each suggests a greater or lesser degree of abstraction (e.g., contrast the "I" or "faculty" or "students" with "the profession" or "our unit" or "it").

Despite these differences, there is one common, nearly universal charac-

teristic: virtually all claims to know imply that the position is—or should be—shared. Professional knowledge is a social phenomenon implying a collegium, a group whose members share essentially equal power and authority.

The social or shared character of knowledge requires us to define the larger communities of which we claim to be part. Herein may lie the source of some of the controversy experienced as we assert the existence of knowledge bases; that action implicitly obliges us to define our collegium, both who is inside it and who is outside. Once we understand that, it is a small step to the realization that one of the most serious challenges to the concept of knowledge bases is the present diversity and possible fractiousness of that collegium.

Another implication of the shared character of knowledge is that sooner or later, standards will be derived from that knowledge. We must think more, however, about the meaning of the word "standard." When we have used the word of late, we have generally meant "meeting the mark." There is a second meaning, however, associated with music, as in "an old standard,"a piece that is well known and widely accepted. This, in turn, suggests that in the months and years ahead, we must give careful analytic attention to the options for and limits of program diversity in the context of asserted knowledge bases. The knowledge that informs or undergirds the practice of teaching and teacher education should be present or reflected in the design and operation of *all* teacher preparation programs (especially given certification reciprocity among states). Our much-asserted desirability of diversity in teacher education may be a function of idiosyncratic factors, rather than of legitimate professional differences of opinion and, therefore, in certain important respects—especially in its current form—antithetical to the professional aspirations we claim to have. The presence of professional knowledge in all preparation programs need not result in sameness across all the programs, as the concluding section of Chapter 3 will suggest.

In summary, establishing the knowledge bases underpinning teaching and teacher education defines the extent and depth of any special *authority* we in teacher education have to participate in the initial preparation of future teachers. If there is no special knowledge that informs teaching, then there is no justification for special faculty or units dedicated to its refinement and transmission. Knowledge, in short, warrants and justifies any special role teacher educators may have.

Knowing as Active and Dispositional

Defining the collegium and establishing authority are two key notions associated with the rationale for linking knowledge bases to program change in teacher education. There also is a third: A unit's or program's claim to be

knowledge based is meaningless in the absence of vigorous manifestations of the active, attitudinal, and dispositional dimensions of *knowing as a dynamic, reflective process*. The commitment to knowledge bases is a commitment to continuous change, growth, and development in teacher education. In this way, the knowledge base for teacher education is like the knowledge base for all professions—constantly in the state of scholarly evolution.

Many of the metaphors used to talk about knowledge, however, implicitly conflict with the conception of knowing as an active or dynamic process. For example, consider how ponderous are the connotations of the very word *knowledge*. It strikes the ear as heavy, unyielding. Its aura is weighty, and many of the metaphors dealing with knowledge convey associated images: *rest on; base; foundations; impact; solid; body; substantial; storehouse of*; and so forth.

To the extent that we perceive of knowledge as substance, as a thing, as portable, we encourage an essentially static, acquisitive, even materialistic view of knowledge. This circumstance does an essential disservice to our purposes, to professional practice, and to the aim we seek to serve by engaging in teacher education's "professional project."[19]

Consider the contrast between the concepts of knowledge and knowing. Knowledge is passive; knowing, active. Knowledge focuses on what inquiry and experience have established, what is stable, what is secure. Knowing stresses the dynamic, tentative, expanding, propositional character of knowledge.

Knowing is important for professionals, not only because it equips us to deal with the everyday challenges of practice, but also because of its dynamic, attitudinal, reflective, motivational, and dispositional dimensions. Philosopher Thomas Green of Syracuse University points out (conundrum though it may appear) that the mark of true professionals is that they know what to do even when they have reached the limits of their knowledge![20] Knowing is important, not just because of the authority of the knowledge we have at hand, but because of the capacity knowing provides to find or approach what is *not* at hand. Thus, the knowledge base for any professional should result in that individual's knowing beyond the known and possessing the acquired capacity to act with wisdom in unknown situations.

These observations are important because they imply that *the way* faculty in programs and units hold their knowledge is at least as important as *what* that knowledge is or *that* it is held at all. In other words, it is not just the stand that the knowledge constitutes, but the stance taken in respect to it. Shulman argues for a conception of teaching that emphasizes comprehension and reasoning, transformation and reflection.[21] Elaborating upon his theme, Shulman addresses knowledge bases and the processes of pedagogical

reasoning and action. What is especially important is the centrality of the proposition that teaching is about knowing—that the purpose of teaching is to help others know, and that in the course of teaching, both teacher and learner arrive at understandings, at knowns, that they did not have earlier. Shulman supports the argument that a crucial element in the commitment to link knowledge bases to professional preparation programs is the attitudinal and dispositional commitment to continuous inquiry and reflectiveness associated with knowing as an active, dynamic process.

WHAT DOES IT MEAN TO APPLY KNOWLEDGE IN TEACHER PREPARATION?

I have presented some categorizations of knowledge that apply to teacher education programs and have explored several dimensions of what it might mean to know. Now I consider briefly what we do and what it means when we link knowledge to professional preparation programs.

Social and behavioral inquiry is rich with metaphors.[22] So it is with discussions of how the processes and products of inquiry might affect teaching and teacher education. What effect does the phrase *knowledge base* have on our thinking? Does it mean, literally, something solid on which to stand? But is, then, the knowledge *under*, rather than *in*, our programs or activities? And what might such a distinction mean? To say, instead, that teacher education programs should be *informed* by knowledge seems somewhat better. Here the language implies that the knowledge is *somehow* in, or part of, the rationale and justification of the program rather than merely *under* it. Other terms are used. We hear that programs "rest" on knowledge, that knowledge "impacts" (literally "hits") a program, that programs "use" knowledge, and that knowledge is "applied" (like paint or brush strokes or decals?) in or to programs.

Although this metaphorical language signifies intention and suggests a relationship, it does not describe that relationship in any explicit way. What are the ways in which knowledge can be associated with professional preparation programs? Three suggest themselves.

Knowledge as Content

The most obvious way in which knowledge relates to professional preparation programs is as curriculum content. The knowledge, simply put, is what we teach. For example, the cloze procedure in teaching reading, the construction and uses of multiple-choice tests, the nature of handicapping conditions, or the explication of how children learn are examples of knowledge as content. Our knowledge is made manifest in *what* we teach.

Knowledge as Rationale

A second, perhaps more important, way in which knowledge is used is as the supporting rationale for curricular or instructional decisions. In this use, our knowledge is more manifest in *why* we teach what we teach. For example, teachers encounter value issues and ethical dilemmas minute by minute, a reason we ought to attend to such matters in teacher education. Or, given the injunction that those who espouse knowledge and values (as all professionals do) should practice what they preach, then professional preparation units in education should be exemplars of best instructional practice. From curriculum development, the knowledge that different children depend upon varying sensory modalities for their learning may be made manifest through materials that provide alternate routes to the learning of the same concepts (through reading or through manipulables, games, audiovisual approaches, simulations, and so forth).

The role of knowledge in developing rationales also applies to broad purpose, program definition, and structure. Knowing the kind of professional a program is preparing is important. Such knowledge includes the basic aims served by the profession as well as images of who the professionals are and the way they are intended to function overall. For example, knowing that teachers serve the societal value of ensuring the continued survival of our republican form of democracy has profound implications for overall curricular designs, the organization of schools, and instructional processes. The knowledge of differences in the principles of human development for young children, as contrasted to adolescents, informs and supports decisions to create distinct programs of preparation for teachers serving each. That doctorates ought to signify, among other things, the capacity of the holders to express themselves with clarity and precision should suggest that students who fail to develop such a capacity might legitimately be dropped from doctoral programs. In such an insistence, our knowledge of an intended goal establishes a criterion to act upon. Knowledge, in short, can be the *reason* for content, for instructional practice, or for program organization or structure.

Knowledge as Process

A third way knowledge applies to professional preparation programs in education is in the way we teach. Teacher preparation programs impart propositional knowledge about effective instruction, including planning for it, conducting it, and evaluating its effectiveness. Teacher education programs, however, are themselves instructional offerings in every sense. In every respect that is appropriate, therefore, teacher education units have an obligation to employ instructional and other professional processes that are congruent with current knowledge on such matters. Much more extensive

treatment of this matter is reserved for Chapter 3, in particular, the treatment of NCATE Standard I.B.

Consideration of these three manifestations of the application of knowledge to teacher education is incomplete without considering an implication: Units will have to exercise judgment. While this is no different from any other basic assumption that might be said to underlie our responsibilities, it is nonetheless important to acknowledge it in the context of the present discussion.

The commitment to knowledge based teacher education is not an off/on, zero/one proposition. Choices have to be made. The work of any one scholar or researcher in teacher education might conflict with that of any other. For example, Jackson argues that we should do away with talk of a knowledge base for teaching. Arter and Jenkins, in their critical appraisal of the research relating to the assumptions underlying differential diagnosis of learning modalities, conclude that there is no evidence for their utility in special education.[23] Other reviewers of research on learning modalities maintain otherwise.[24] Practitioners refer to and use the concept to what they feel is good effect. Brophy argues for contingency rewards and Katz, against them.

Those who commit themselves to knowledge bases will have to exercise judgment in what they use and how they use it. The sources of knowledge listed earlier are also the sources of error. The views of leading researchers and scholars diverge or conflict. The images of teaching advocated by some scholars may be perceived as excessively narrow, hopelessly romantic, or professionally unwise. There are, in short, no neat, unassailable prescriptions forthcoming from the knowledge bases of teaching and teacher education. There are instead evidence, reasoned propositions, and alternative conceptualizations to be sifted, weighed, and selectively framed into coherent programs of study. Commitment to knowledge bases, therefore, means a willingness to enter into the processes and risks of judgment.

SUMMARY AND CONCLUSION

What can be concluded from this discussion of the rationale for and implications of linking knowledge to professional preparation programs in education?

1. Teaching is about facilitating knowing in others; therefore, the preparation of teachers, a specialized domain of professional teaching, ought to reflect that relationship.

2. The knowledge to which professional preparation programs should be linked is that which has received the imprimatur of the collegium. Idiosyncratic claims to knowledge without shared sanction are insufficient for action in the name of professional purpose. Further, any claim to link teacher preparation to its knowledge bases is also a commitment to work to define the teaching profession's collegium and to marshal the judgments of that collegium in defining and establishing the parameters of those knowledge bases.[25]

3. The underpinning rationale for linking knowledge to professional preparation lies in the warrant knowledge gives for autonomous action in the professional setting. If one *knows*, then other things being equal, one is permitted to *do* in service of approved ends.

4. The meaning for those of us in higher education settings should be clear. The *raison d'etre* of higher education is knowledge transmission. If there is knowledge, our role is secure. If there is not, our role is highly problematic. Any claim for our continued participation in professional preparation, therefore, must be accompanied by a demonstrable commitment to serving the knowledge claim.

5. Any unit making the claim that its programs are knowledge based should be expected to display continuing reflectiveness and other dispositional and process concomitants of claims to know.

6. The commitment to knowledge is an invitation to internal debate, to continuous change, and to the risks and opportunities of the exercise of judgment.

NOTES

1 B. Othanel Smith in collaboration with Stuart H. Silverman, Jean M. Borg, and Betty V. Fry, *A Design for a School of Pedagogy* (Washington, D.C.: U.S. Government Printing Office, 1980 [Publication No. E-80-42000]), p. 4.

2 David C. Smith, ed., *Essential Knowledge for Beginning Educators* (Washington, D.C.: AACTE/ERIC Clearinghouse on Teacher Education, 1983).

3 Lee S. Shulman and Gary Sykes, eds., *Handbook of Teaching and Policy* (New York: Longman, 1983).

4 Ibid., p. vii.

5 Ibid., pp. 492-97.

6 Philip W. Jackson, "Facing Our Ignorance," *Teachers College Record*, vol. 88, No. 3 (Spring, 1987): 384-89.

7 Ibid., p. 386.

8 See, for example, Rosenshine's chapter in *Handbook of Research on Teaching*, 3d ed., (Merlin C. Wittrock, ed., [New York: Macmillan, 1986]) on "Teaching Functions," which he wrote with Robert Stevens.

9 Repeated in print in"Unsolved Issues in Teaching Content: A Critique of a Lesson on Federalist Paper No. 10," *Teaching and Teacher Education*, vol. 2, no. 4 (1986).

10 Virginia Koehler, "Introduction: A Research Base for the Content of Teacher Education," in *Essential Knowledge for Beginning Educators*, ed. Smith, pp. 1-3.

11 A recent example is the volume edited by Jane Hannaway and Marlaine E. Lockheed, *The Contributions of the Social Sciences to Educational Policy and Practice: 1965-1985* (Berkeley, Calif: McCutchan Publishing Corporation, 1986). For a somewhat different instance, one that explores the value implications of educational inquiry conducted in a number of the academic disciplines, see Hendrik D. Gideonse, Robert Koff, and Joseph J. Schwab, eds., *Values, Inquiry, and Education*, Center for the Study of Evaluation, Monograph Series in Evaluation, no. 9 (Los Angeles: University of California at Los Angeles, 1980).

12 The explanatory power of names to suggest knowledge content domains was confirmed by many participants in AACTE's knowledge base workshops who reported that their reading of the outline materials describing the chapters of AACTE's major forthcoming volume, *The Knowledge Base for the Beginning Teacher*, was enhanced, conceptually, by the inclusion of authors' names. The names enriched the meaning of otherwise telegraphic subject headings.

13 Lee S. Shulman, "Paradigms and Research Programs in the Study of Teaching," in *Handbook of Research on Teaching*, 3d ed., ed. Wittrock, p. 26.

14 Kenneth M. Zeichner, "Alternative Paradigms of Teacher Education," *Journal of Teacher Education*, vol. 34, no. 3 (May-June, 1983); p. 3.

15 N. L. Gage, *The Scientific Basis for the Art of Teaching* (New York: Teachers College Press, 1987).

16 Wittrock, ed., *Handbook of Research on Teaching*.

17 Debate over whether to include this "source" was resolved affirmatively because of the frequency with which it is asserted or silently believed by a larger current number of teacher education students than many of us may realize.

18 Philip W. Jackson, *Life in Classrooms* (New York: Holt, Rinehart, and Winston, 1968).

19 Gary Sykes, *Teacher Education and the Professional Project: An Account of its Predicaments*, mimeographed (Washington, D.C.: National Institute of Education, 1983).

20 Personal conversation with the author.

21 Lee S. Shulman, "Knowledge and Teaching: Foundations of the New Reform," *Harvard Educational Review*, vol. 57, no. 1 (February 1987).

22 For a good discussion of this, see Herbert W. Simons, "The Management of Metaphor," *Rigor and Imagination: Essays from the Legacy of Gregory Bateson*, C. Wilder-Mott and John Weakland, eds., (New York: Praeger, 1981). See also: Donald A. Schon, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983); and Hugh Munby,"Metaphorical Expressions of Teachers' Practical Curriculum Knowledge," paper presented at the American Educational Research Association annual meeting, Washington, D.C., April 1987.

23 Judith A. Arter and Joseph R. Jenkins, "Differential Diagnosis—Prescriptive Teaching: A Critical Appraisal," *Review of Educational Research*, vol. 49, no. 4 (Fall 1979).

24 Lyn Corno and Richard E. Snow,"Adapting Teaching to Individual Differences Among Learners," in *Handbook of Research on Teaching*, 3d ed., ed. Wittrock, pp. 617-18.

25 An important caveat needs to be stated here. Adopting the dynamic, dispositional dimensions of commitment to knowledge as a basis for program design and development, as already has been said, also implies a commitment to change. New work will reveal new ideas and understandings, and those ideas will have to surface somewhere and be exposed to public scrutiny and, thus, will become available for incorporation into what Maynard Reynolds likes to reference in citing Harry Broudy's concept of the *consensus doctorum*. The new contributions to the emerging professional consensus have to come from somewhere. The key, when departing from the existing professional consensus, is to meet the obligation fully to present the evidence and the rationale for doing so.

CHAPTER
2

What Knowledge Informs the Design, Development, and Delivery of Teacher Education?

The treatment in this section is based on the presumption that teacher educators are serious about education for a profession, a profession that may not yet be one, but a profession nonetheless.

Saying so is important. For a group to call itself a profession, at least three conditions must obtain: a clear, unyielding moral commitment to fulfilling a deeply held societal need or value; specialized intellectual knowledge; and control over the standards of entry to that profession and its conditions of practice.

Teachers and teacher educators believe they meet the first condition. As illustrated in the introduction to the preceding chapter, there is disagreement about specialized knowledge, the second condition. And the third, control over the standards of entry and conditions of practice, clearly does not at present exist. There are some exciting signs. Participation of the National Education Association (NEA) and the American Federation of Teachers (AFT) in the formation of the National Board for Professional Teaching Standards and AFT's recent successful initiative to seek participation in the governance of NCATE point, in the long term, to the prospect of significant changes. At present, however, by the definition offered above, teaching is not a profession.

Teacher educators, of course, cannot by themselves define the abiding social purpose that the teaching profession serves. Neither can we establish control over the standards of admission to the profession or its practice. Our unique role in preservice preparation, however, imposes special leadership obligations to explicate the special knowledge underpinning the teaching profession.

In recent years, dialogue in teacher education has proceeded principally in terms of the concept of knowledge bases. This chapter explores a further formulation of the knowledge base, one broader in its focus: What must we know to develop and maintain professionally responsible teacher education

programs? Responses to this question should make it clear that the knowledge base question is not a narrow, implicitly empiricist concern, but is one which pertains to values and fundamental purposes as well.

What teacher educators need to know to carry out their responsibilities does not arise exclusively from scientific inquiry or scholarship. Sometimes what we must know is what we or others have decided, rather than what has been discovered. Furthermore, all that we must know does not necessarily exist prior to the implementation of a program. In fact, some of what we must know cannot be known until we begin a program, and some cannot be known until we have finished one, at least with a given cohort of students.

To perform their duties responsibly, teacher educators need to know the following:

- The purpose of their profession.
- The professional roles in education for which they are preparing and the fact that, if they prepare for more than one role, the conceptualization of each is congruent with the others.
- The knowledge bases that inform the roles for which they prepare.
- How they are approaching certification of the presence or absence of certain characteristics in those who would become professional educators, characteristics that professional preparation programs can do little to create or eliminate but that are nonetheless of crucial importance in the makeup of a professional.
- That there is consistency between their own professional practices and those skills they seek to impart to their graduates.
- Whether they are achieving their stated aims, and that identified shortfalls in achievement are stimuli for program redirection.

THE PURPOSE OF OUR PROFESSION

Teacher educators cannot design and deliver effective professional education programs without knowing the purpose of the profession they seek to serve. That knowledge must be explicit and self-conscious. It is knowledge that does not arise exclusively from empirical inquiry; it is as much knowledge that arises from processes of design and decision. What do we *choose* to be as a profession? What abiding societal values do we seek to serve? What norms guide us? Our understanding of purpose is a key organizing principle from which a great deal follows. Purpose tells us *who* we are as professionals and *what* we are about.

There are, no doubt, many possible formulations. For me, the profession is teaching, and its purpose in our society is the continuous reinvention of our evolving republic. Ours is a free society. It depends for its survival on sustaining the form of government we now enjoy. That representative government constitutionally limits the powers of the three branches of government. In a variety of ways, it constitutionally protects the rights of individuals and electoral minorities from the otherwise intrusive powers of the majority. Such a government cannot survive unless each successive generation of citizens understands its meaning and values and the responsibilities associated with those meanings and values. Performance of those individual civic responsibilities depends on the development of a variety of generic intellectual and social skills and values that have to do with independence of mind, problem-solving and decision-making, and achieving clarity of purpose—all in the context of a sociopolitical-technological milieu bounded by time and culture.[1]

Serving the moral purpose of maintaining a free society is the particular commitment of our teachers. It is a high aim. It means, among other things, that no school experience should be uninformed, silent, or otherwise out of touch with the role of achieving that basic end. In other words, the content and processes of teaching in the nation's schools are not ends in themselves. They are means to ends and must be capable of continuously being justified accordingly; the same applies, therefore, in the education of teachers.

Clarity about the purpose of the profession is necessary, for within that purpose are the essential values of the profession. From these values can be derived fundamental substantive and professional norms and attitudes guiding professional preparation and licensure or certification. Furthermore, a clear sense of purpose defines the frame in terms of which decisions about specialized and nonspecialized knowledge can be made. Finally, implicit in an articulation of purpose is the sense of how educators perceive themselves as professionals and the responsibilities that sense of profession exacts from them.

CONCEPTIONS OF PROFESSIONAL ROLE AND PERFORMANCE

Professional preparation programs must be grounded on clear conceptions of the professional roles for which they prepare students. Images of what teachers, counselors, or administrators should be, of what their functions are, and of how they should interact with clients and diverse professional peers are essential to sound program design in teacher education.

Teachers have been portrayed as artists,[2] as moral craftsmen,[3] as applied scientists,[4] as executives,[5] or as improvisers.[6] An image, or model, can serve

as an organizing principle to guide subsequent program development and implementation. When there is no guiding model, however, students are likely to be exposed to a grab bag of conceptions presented by the faculty and the clinical sites with which they interact. The chosen conception of the teaching role obviously affects recruitment of teaching candidates as well as curriculum design and program structure.[7]

Once we get past the question of holistic models, or images, and approach specific functional responsibilities of teachers, we encounter different, finer-grained orders of organizing principles for program design.

Volumes could be and have been written about the various functions embraced in the teacher's role. Teachers select curriculum content. They organize that content. Teachers make decisions about instruction and the evaluation of student learning and student behavior. Those decisions must be justifiable, not only on their individual merits but also in terms of students' preceding, parallel, and following learning experiences. As Shulman and Sykes put it:

> Ignorance of prior, concurrent and future curriculum experiences for one's students is not excusable. It is tantamount to the health-care providers for a single individual remaining unaware of what the others are prescribing, both behaviorally and medically.[8]

Teachers must carry out the behaviors and performances implied by the decisions they make. Furthermore, they must do these things in the context of that unnervingly rapidly unfolding knife-edge of time that all teachers recognize as the insistent reality of their daily professional lives. It is this reality that underlies Yinger's provocative interest in the teacher as improviser.[9]

Teachers work with children of widely differing capacities, with children born of the well-to-do and of the less-privileged, and with children from varying cultural and ethnic groups. Teachers should be able to consult and work effectively with other professionals in their school and system. Teachers must be able to relate to the parents of the children they teach.

In summary, teachers' functions are complex, demanding, highly individualistic, and yet deeply sited in an organizational and sociopolitical context. Thus, teacher educators must have a clear conception of the teaching roles for which they are preparing students, because this conception guides the totality of the program.

Clarity of role conception is equally essential for every professional education role in whose interests preparation programs are mounted. That leads to a corollary proposition—one that flows from principles of consistency and comprehensiveness in the conceptualization of a profession: Any school, college, or department of education that prepares students for more

than one professional role in education must assure that all preparation programs produce graduates for roles that are congruent and consistent with one another.

For example, the teachers being prepared are the ones with whom the administrators being trained expect to be working. School psychologists should be prepared in terms of a role image congruent with that of the teachers and counselors also being trained by the professional education unit. If school psychologists are being prepared on an indirect services and professional consultation model, the teaching candidates should be prepared to that same expectation; they should expect to ask for and receive consultation from their districts' school psychologists. They should be prepared so that they understand the requirements, objectives, and implications of such consultation. If school principals are being prepared as instructional leaders, the teaching candidates should be prepared to comprehend what such leadership means and how it relates to their own professional responsibilities, both to lead and to follow.

While this kind of knowledge of the congruence among professional roles may be subtle, it is vitally important. A unit responsible for preparing educators cannot claim a clear sense of definition of the profession it is serving unless it demonstrates consistency in its conceptualizations of the several roles for which it prepares. Such agreement is as important for the unit as it is for the prospective professional. It speaks to the sense of common purpose that ought to guide individual faculty members in the teacher education unit. It helps to assure coordinated performance of the differentiated assignments within the teacher education program. It defines the organizational context within which decisions about the program and its delivery are made and, as such, is important to the maintenance of a quality effort.

ACADEMIC AND PROFESSIONAL KNOWLEDGE AND SKILLS

From the two broad ends just cited, one can infer quite specific domains of academic and professional knowledge. These are the "knowledge bases," dialogue about which has been a dominant characteristic of the past decade of teacher education policy. Many have considered these matters.[10] Space will permit only a broad exposition of some prevalent ideas.

Liberal Education

The education of teachers must equip them in many different respects. Teachers must be good models of the educated persons they seek to produce. In fact, teacher educators ought to insist, by design and deed, that those who would become teachers routinely come to be seen, as a group, as the most

liberally educated of all professionals. The importance of a liberal education for teachers is not just for the models it provides. It has an important instrumental value as well: It prepares teachers for the development, understanding, and justification of the decisions they make. Teachers must understand the culture and era in which they work. They must understand the domains of human knowing (for example, the natural and social sciences and the arts and humanities) and the relationships among them. Both as models and as professionals working in tremendously complex circumstances, teachers require considerable skill in critical thinking. Their education must enable them to handle values discourse. It should guarantee their ability to express themselves with clarity and precision in speaking and in writing. An education of this kind assures that teachers will possess the generic tools to function as professionals. They will model for their students the goal of an educated citizenry, a goal they seek to help their students achieve in service to the continuously evolving purposes and foundations of our free society.

I have, of course, in a very brief fashion, described what we mean by someone who has been exposed to and achieved a liberal education. It is an education that goes far beyond a mere smattering of courses—more than choices from columns A, B, and C of a menu offered by an arts and sciences faculty that has been prescribed to assure breadth of exposure. I am talking about an education facilitated by a curriculum designed and delivered to achieve aims larger than individual faculty members or departments are likely to define by themselves.

Intellectual Foundations

Teaching candidates must be liberally educated, but they also must be deeply versed in the intellectual underpinnings of their profession. They must know the history of schooling and its evolving character. They must understand the connections between different kinds of societies and the institutions those societies evolved or created to carry out cultural transmission. Part of cultural transmission, of course, is the manner in which societies preserve what they have gained by providing for mechanisms—educational, social, political, and technological—that support and sustain productive change in society. Teachers and other professional educators must understand the philosophical issues embedded in the practices of schooling, especially schooling in a free society. They must understand how our educational institutions are supported, how the profession is organized, and what its past and emerging struggles have been. Without such understandings professional educators are ill-equipped to participate fully and intelligently in public policy discussions bearing on the profession or in the important dis-

cussions within the profession pertaining to organization, standards, and accountability.

Subject Matter

Teaching candidates must know their subject matter. In fact, they must know it in ways that reach considerably beyond the level of knowledge that academic majors in that discipline gain.[11] What is the difference between, for example, a biology teacher and a biology major? They both need to know biology, but where the biology major's studies conclude, the biology teacher's have but begun.

First, beyond mere content, the biology teacher ought to know how to relate the discipline of biology to the different cognitive abilities and operations and learning styles of students. The teacher of biology must be intimately familiar with the interface between the content and skill dimensions of all the various components of the biology curriculum. The biology teacher also must have intimate knowledge of cognitive and affective skills *(a)* that are prerequisite to the study of biology, *(b)* that could conceivably be addressed coterminously with biological studies (and, therefore, can be considered mutually reinforcing for students), and *(c)* for which biological understandings and skills are themselves prerequisite to further studies in other subject matter fields (for example, chemistry, environmental studies, scientific and technological aspects of public policy, and so forth). These three kinds of knowledge establish what might be called the curricular context for the teaching and learning of biology.

Second, the biology teacher must be familiar with the entire *corpus* of the curriculum materials for biology. This is not knowledge about biology, per se, but rather is knowledge about the materials available for the *teaching* of biology.

Third, the biology teacher must know the content-specific instructional methods for biology. Every curriculum field shares generic instructional methods with all the others, but each has its own specific content requirements. Simple examples might include techniques for teaching mitosis or the functions of semipermeable membranes or the concept of photosynthesis. Handling the important and sensitive task of teaching the theory of evolution in the presence of sectarian challenges to that content would require special instructional skills. Equally complex but less controversial, perhaps, might be teaching the concept of interrelationships in the environment or the ecosystem.

These three additional kinds of knowledge about subject matter in the context of *teaching* go substantially beyond mere expertise in content alone. They are essential knowledge for the teacher.[12] Academic majors learn their

material for their own use; teachers must master it first for themselves and then to help others learn it.

Professional Knowledge

Finally, teachers need knowledge and skills that equip them for their generic responsibilities as teachers. Here are referenced examples of the knowledge and skills that affect teachers' effectiveness in the classroom:

- human learning and the variations that can exist
- cultural differences in the context of learning and schools
- instructional techniques
- evaluation of student learning
- behavior management
- ethical dilemmas of teaching
- professional and client consultation skills
- performance skills of teaching, including voice, manner, and poise
- curriculum design
- professional organizations and responsibilities

Obviously, these headings are the stuff and substance of the professional curriculum. Each could have been accorded a paragraph or even a chapter.[13] Fleshing them out and developing a firm consensus on the core of each is one of the abiding tasks of the teacher education collegium.

CANDIDATE QUALIFICATIONS DIFFICULT TO DEVELOP

Teacher education programs seek to *add* value to the students who present themselves. That is what their curriculums and their objectives are all about. Teacher educators are fully aware, however, that some of the characteristics of good, professional teachers, because of their attitudinal or affective nature, must exist prior to the actual preparation program or emerge almost *en passant*. On the positive side, the capacity for empathy, a belief in the ability of every child to learn, comfortableness in the presence of children or young adults, curiosity, and initiative are examples of these characteristics. Only with great difficulty could a formal program generate in education candidates *de novo* these qualities of effective professionals.

On the negative side, there are characteristics that might lead us to wish to exclude some persons from teaching. If we believe that certain attitudes and values are crucial to effective teaching and also to how teachers should

present themselves to pupils in our society, then a teacher education program ought to be able to say with reasonable confidence that it does not knowingly recommend for certification racists, sexists, bigots, or persons uncomfortable with or warped in their relationships with all or certain children. To be blunt about this, more than a few of us in teacher education doubt that we are doing as well on this score as we ought. On the one hand, virtually no one in American society is wholly immune from one or more of these discomforting afflictions. On the other, excluding those seriously afflicted in these ways flows quite directly from the broader societal aims that teachers in our society seek to serve.

If the deep societal value served by the teaching profession is the education of individuals who can sustain and improve the republic in which we live, then those with dispositions and attitudes inimical to such an aim ought to be excluded from service. We must address these matters directly, partly in our admissions criteria, but mainly in selective retention criteria and procedures. This constitutes a category of knowledge because we must be able to say with assurance both that we *know* what we are doing respecting preexisting qualifications or disabilities and that what we are doing is having the intended screening effect.

Of course, individual students may be helped to revise prior prejudices, change their attitudes, or build in effective and humane screens to deep-seated personal inclinations that, on reflection, they have come to reject. All of us are afflicted to some degree by such characteristics. But we must provide students with opportunities to identify such propensities and to develop effective strategies for assuring, insofar as humanly possible, that negative consequences will not befall their clients in the future. The legitimacy of any claim we make to mount professional training rests in part on our ability to say that we know what we are doing with respect to such matters and with what results.

CLINICAL FIDELITY

Teacher educators must practice what they preach. A teacher education unit has a moral obligation to deliver instruction in a fashion wholly consistent with the precepts of best practice it seeks to pass on to its students. This is an obvious obligation at the high level of generality just stated. After all, if we do not practice what we preach, why should our students pay attention to us? Why shouldn't they go out and exercise precisely the same personal (and intellectually inconsistent) judgments they perceive us to be exercising? We would constitute a personalistic, not a professional model, and our students

would have every right to follow personalized solutions in their own teaching lives.

The concept of clinical fidelity is much more complex in application and far-reaching in its implications than it might appear. For example, it implies much greater and more detailed collective and cumulative scrutiny of individual faculty members' instructional approaches than has ever been imagined in teacher education. Instructional design requirements for entire teacher education programs will be far more demanding than any that have been applied in the past. And yet the moral power of the argument is unimpeachable. There are dramatic consequences for losing credibility in the eyes of our students should we violate clinical fidelity in our performance. This concept is firmly embedded in NCATE's knowledge base standards, in particular Standard I.B. Because of its overall importance, it is the subject of major attention in the next chapter.

FORMATIVE AND SUMMATIVE EVALUATION

Teacher education units have an obligation to know what is happening to their students as a consequence of the program provided. Is it having the intended effects? Do program graduates function effectively in their roles when they graduate and are first employed? Are discrepancies between outcome and intent used as a stimulus for program revision?

Professional preparation programs must perform formative and summative evaluation to assure that their instruction is effective, their program design sound, and their clinical placement practices consistent with program purposes—in short, that the whole works as intended. Pursuit of this kind of knowledge in the professional preparation unit is an essential expression of the concept of clinical fidelity. It demonstrates a commitment to reflectiveness about function that the unit should seek to impart to all its graduates.

SUMMARY AND CONCLUSION

In this chapter, I have argued that teacher educators must have two ends firmly in mind—the central purpose of the profession they train for and the roles for which they prepare. To achieve those ends, teacher educators must be intimately knowledgeable about four means to their ends—the knowledge bases underpinning professional practice (liberal education, intellectual foundations, subject matter, and professional knowledge); the preexisting qualifications of candidates; the fidelity of preparation programs to sound clinical practice; and the outcomes of formative and summative evaluation.

What is being advanced here is the proposition that teaching and teacher education must be approached, first and foremost, with the under-

standing that they are intellectual activities demanding careful preparation, crisp thought, great tenacity, and uncommon rigor.[14]

NOTES

1 A particularly powerful statement relevant to the moral purpose of education can be found in Thomas Green's 1984 John Dewey Lecture, "The Formation of Conscience in an Age of Technology" (John Dewey Society, 1984). In it, Green makes a compelling argument that moral education, rather than being a curricular topic in its own right, should be more properly thought of as a complex outcome of individual learnings in the five categories of craft, membership, sacrifice, memory, and imagination.

2 H. A. Dawe, "Teaching: A Performing Art," *Phi Delta Kappan*, vol. 66, no. 7 (1984).

3 Alan Tom, *Teaching as a Moral Craft* (New York: Longman, 1984).

4 Those who use this image tend to attribute the view to the work of scholars such as Brophy, Doyle, Good, Rosenshine, Gage, B.O. Smith, and Resnick.

5 David Berliner, "The Executive Functions of Teaching," in J. Osborn, P. T. Wilson, and R. C. Anderson, eds., *Reading Education: Foundations for a Literate America* (Lexington, Mass.: Lexington Books, 1985).

6 Robert J. Yinger, "By the Seat of the Pants: An Inquiry into Improvisation and Teaching," paper delivered at the annual meeting of the American Educational Research Association, Washington, D.C., April 1987.

7 For another exposition of this idea see Henrietta L. Barnes, "The Conceptual Basis for Thematic Teacher Education Programs," *Journal of Teacher Education*, vol. 38, no. 4 (July-August 1987). See also: Gideonse, "Guiding Images for Teaching and Teacher Education," in *The Dynamics of Change in Teacher Education*, vol. 1, ed. Thomas J. Lasley (Washington, D.C.: AACTE, 1986).

8 Lee S. Shulman and Gary Sykes, "A National Board for Teaching? In Search of a Bold Standard." Paper commissioned for the Task Force on Teaching as a Profession, Carnegie Forum on Education and the Economy, January 26, 1986.

9 Yinger, "By the Seat of the Pants."

10 For example, David C. Smith, ed., *Essential Knowledge for Beginning Educators* (Washington, D.C.: AACTE/ERIC Clearinghouse on Teacher Education, 1983); B. O. Smith et al., *A Design for a School of Pedagogy* (Washington, D.C.: U.S. Government Printing Office, 1980); P. L. Hosford, ed., *Using What We Know About Teaching*, (Alexandria Va.: Association for Supervision and Curriculum Development, 1984); N. L. Gage, *The Scientific Basis for the Art of Teaching* (New York: Teachers College Press, 1978); Merlin C. Wittrock, ed., *Handbook of Research on Teaching*, 3d ed., (New York: Macmillan, 1986); "A Special Issue: Research on Teaching," *Elementary School Journal*, vol. 83, no. 4 (March 1983); Michael J. Dunkin, ed., *The International Encyclopedia of Teaching and Teacher Education* (Oxford: Pergamon Press, 1987); and Lee S. Shulman and Gary Sykes, *Handbook of Teaching and Policy* (New York: Longman, 1983). Currently under development are two comprehensive volumes. Under AACTE sponsorship is a twenty-four chapter volume titled *The Knowledge Base for the Beginning Teacher*. Sponsored jointly by the Association of Teacher Educators

and Macmillan Co., a volume titled *Handbook of Research on Teacher Education* is now being prepared.

11 I am indebted to Lee Shulman's presidential address in 1985 to the American Educational Research Association for the concepts which follow.

12 As an aside, this kind of formulation of subject matter knowledge necessary for teachers underscores the error of public policy proposals and enactments that propose, for example, that any bright college graduate who passes a test on content can easily slip into teaching role and perform it responsibly with just a couple of hundred hours of formal professional preparation.

13 For example, consider the chapter headings of the AACTE Knowledge Base Task Force Project titled *The Knowledge Base for the Beginning Teacher:* "Explanations in Education"; "Structuring Knowledge for Beginning Teaching"; "Teachers of Substance: Subject Matter Knowledge for Teaching"; "Conceptions of Teaching and Approaches to Core Problems"; "Principles of Sociology and Anthropology: Context, Code, Classroom, and Culture"; "Classroom Organization and Management"; "Teaching Students to Assume an Active Role in Their Learning"; "Learners and Learning"; "Classroom Instruction"; "Knowledge of the Learner: The Development of Children's Concepts of Self, Morality and Societal Convention"; "Students With Special Needs"; "Social and Political Contexts"; "The School District: A Unique Setting"; "Social Organization of Classes and Schools"; "Beginning Professional Teachers: The Need for A Curricular Vision of Teaching"; "Evaluation"; "Why Staying One Chapter Ahead Doesn't Really Work: Subject-Specific Pedagogy"; "Knowledge About Reading and Writing"; "Knowledge, Representation, and Quantitative Thinking"; "Meeting the Developmental Needs of Pupils: Toward Effective Classroom Guidance"; "Professional Communication and Collaboration"; "Legal Rights and Responsibilities of Public School Teachers"; "The Ethical Dimension of Teaching"; and "Coda: The Knowledge-Driven School."

14 Asserting the primacy of the intellectual requirements of teaching does not deny that it has other dimensions. Yes, it is about empathy and modeling and affect. If there be not love and commitment and—that marvelous phrase from the sixties—"unconditional positive regard"—then teaching is somehow incomplete. But if we slight the intellectual underpinnings, if we underestimate the intellectual character of the thought that must guide teaching, if we too easily come to rest on the notion that so much artistry necessarily characterizes what we do that apprenticeship is the only true route to training, then we will never have a profession (especially if we then fail to develop multi-year, exhaustively thorough, and heavily supervised apprenticeship training). Necessary ingredients for our ultimate success in this quest are great discipline, unflagging commitment, and the avoidance of unnecessary compromises. But success also entails developing the capacity and the will to band together—particularly teacher educators and teachers— for the greater good of the profession and its purposes, rather than for the narrower aspirations of the particular settings and times in which we happen to find ourselves.

CHAPTER
3

Interpreting NCATE's Knowledge Base and Related Standards

The experiences in the AACTE-sponsored knowledge base workshops and NCATE-sponsored orientations suggest that teacher educators are attending intensely, even with some anxiety, to the new standards. Participants ask questions such as:

- Does the combination of a newly (December 1987) edited version of the 1985 standards and the concept of redesign as a developmental process result, in effect, in a moving target for units?
- What is the relationship of the 18 standard statements to the 94 criteria for compliance?
- What does the concept of unit accreditation mean?
- What do the standards and criteria mean?
- What can or should units do to bring themselves into compliance?

This chapter and the next are directed to a discussion of these questions.

MOVING TARGET—APPEARANCE OR REALITY?

In October 1985, NCATE's new standards were formally adopted. In December 1987, a newly edited version of those standards was completed and distributed. In addition, since 1985, NCATE officials and staff have spoken frequently of NCATE's developmental posture in implementing the new design. People in the field have expressed concern about what appears to be continuing change. What is the reality?

Respecting the standards language itself, in March 1987, NCATE's Executive Board authorized staff to undertake a tightly controlled editing of the October 1985 standards document. The Executive Board established seven guidelines for the work:

- Standards and criteria should match in scope and specificity.
- Where appropriate, "present only" criteria should be moved to preconditions for evaluation and removed from the criteria for compliance.

- Those criteria that cannot be removed need to be rewritten to make clear that a judgment of quality is called for.
- Misplaced criteria for compliance should be correctly situated in the overall document.
- Emphasis should be on the evaluation of units, not programs.
- Criteria for compliance statements, including "and" statements should be decoupled.
- The number of opaque and/or awkward sentences should be reduced.

The Executive Board asked the Unit Accreditation Board (UAB) to review the staff's edited version. The UAB was instructed to return the document to the Executive Board only if the UAB concluded that the editing had caused substantive changes in the standards, as approved in October 1985.

NCATE staff and the UAB followed a careful process. The resulting edited version was endorsed by the UAB as editorially improved according to the seven guidelines and faithful to the substantive meanings of the version prior to editing. In sum, the edited version may *appear* to be a change, but it is, in fact, substantively true to the concepts adopted two years ago.

What of NCATE's so-called "developmental posture"? In beginning the process of implementing unit review according to the new standards, the UAB stated its expectations that what was learned during the first few rounds of review would be fed back into examiner training, into expectations for Board of Examiner reports, and into the UAB's own audit and decision-making processes. Implementation of redesign began with a small set of pilot institutions, which agreed to be the first to undergo review. An initial set of examiners was trained, visits were conducted, and Board of Examiner reports were prepared. The UAB considered accreditation of the first set of pilot institutions at its September 1987 meeting, using a Pilot Audit Committee especially trained for the purpose.[1]

Immediately following the meeting, the NCATE staff and UAB members most fully involved in that first experience were thoroughly debriefed. The results of that debriefing were sent in several directions. Additional guidance was immediately sent to individuals who would be serving as Board of Examiner team chairs for pending site visits to pilot institutions. Recommendations were made that materially affected the second round of training for prospective members of the Board of Examiners. The initial training of the entire membership of the UAB was similarly shaped by the experience with the first group of pilot institutions.[2, 3]

Owing to its acute awareness of the implications of the developmental

stance that NCATE has adopted, the UAB has explicitly cautioned that no patterns of decisions made in the initial rounds should be extrapolated to future rounds. Improvements in NCATE's management of its own systems and processes are designed to occur as a result of planned systematic feedback during the review of pilot institutions. Those improvements might well appear to yield results in later rounds that differ from those produced in early ones. That appearance, however, would be the result of more sophisticated understandings of what is necesssary in terms of performance and/or evidence to meet standards that have themselves not changed.

STANDARDS AND CRITERIA

Professional education units must meet 18 NCATE standards. The standards are written in broad terms; each of the 18 is accompanied by as few as two or as many as 18 so-called "criteria for compliance," which illuminate the more general language in which the standard itself is couched. The relationships between the standards and their criteria for compliance are delicate. The following can be said:

1. The criteria for compliance are not standards in and of themselves.
2. The criteria for compliance are to be employed by units and the Board of Examiners to help each make judgments as to whether the standard they appear with has been met.
3. It is possible for a unit to be judged to meet a standard without adequately addressing criteria for compliance. In such cases, however, the unit would have to offer other evidence to be validated and judged acceptable by the Board of Examiners.
4. It also is possible for a unit to address the criteria but to be judged to fail the standard as a consequence of other specified evidence.

Questions from the field, however, make it apparent that units want to know the exact weight of highly specific criteria for compliance in judging whether a standard has been met. For example, the third criterion for compliance for *Standard V.B: Resources*, states: "Instructional resources for supervision of practicum experiences do not exceed a ratio of 18 full-time equivalent students to one full-time equivalent faculty member." Similarly, consider the degree of specificity in the expectations in curricular aims in the third criterion for compliance of *Standard I.D: Content of the Curriculum—Specialty Studies*: "mastery of the structure, skills, concepts, ideas, values, facts, and methods of inquiry . . . "

If criteria for compliance are not standards, how should units interpret NCATE's instruction to Boards of Examiners that criteria for compliance for

which evidence cannot be found or for which the only evidence is contradictory shall be cited in the Board of Examiner's report as weaknesses? Finally, some of the major battles during redesign were fought over concepts now embedded in the criteria for compliance. If they are not standards, how should units, Boards of Examiners, and even the UAB understand and apply them?

Some confusion exists because of these ambiguities. It arises because of the desire of the framers of the NCATE redesign to build a system that would move away from the completion of "presence/absence" checklists and toward the exercise of trained professional judgment in accreditation decisions. Under the provisions adopted as part of the overall redesign, Board of Examiner teams must make *considered* judgments about the quality of unit performance, as measured against defined standards. To permit the exercise of judgment, the standards are phrased quite broadly. Each "element" of a standard, however, is provided with at least one criterion for compliance that further elaborates the intentions governing the standard overall.

The emphasis on the exercise of professional judgment opens two possibilities. Hypothetically, it is possible for institutions to meet the standards, not by addressing the criteria for compliance, but by offering other evidence that leads the examiner team to conclude that the standard as stated has been met. Equally hypothetically, a negative judgment could be rendered as a consequence of disqualifying evidence independent of positive evidence responsive to each of the criteria for compliance. For example, no standard or criterion prohibits nepotism. No standard or criterion speaks to the prohibition of serious conflicts of interest. Evaluating the significance of such circumstances and their bearing on accreditability, should they arise, is a matter not for standards or criteria but for the exercise of professional judgment. That is the kind of system NCATE's redesign architects sought to construct.

THE CONCEPT OF UNIT ACCREDITATION

Among the most central changes of the recent NCATE redesign is the shift from program accreditation to unit accreditation. In the past, institutions presented their programs for accreditation. NCATE might have approved all, some, or none of an institution's programs.

Under the provisions of the redesign, the new concept of unit accreditation has been adopted. This concept has important bearings on how accreditation is approached with particular reference to the knowledge base and related standards. In the future, NCATE will approve units as the entities responsible for all professional preparation programs in education. That rationale stems from two beliefs. First, it is the unit that ultimately bears

responsibility for the health—or restoration of health—of its programs. Second, it is the unit that, for professional preparation, is the instrumental manifestation of the larger collegium of the teaching profession, broadly defined.

What, then, is the relationship of programs to accreditation? Will NCATE examiners and the UAB be wholly uninterested in programs and look instead only at unit characteristics? The answer is no; NCATE will look at programs, totally or representatively, to gauge the adequacy and health of unit mechanisms and characteristics relative to the standards as a whole. Boards of Examiners and the UAB will look at programs for evidence that the *unit's* commitment to secure and maintain program accountability respecting knowledge bases, for example, is fully functional. This distinction is not unique to the knowledge base standards; it is central to all the standards. What is being accredited is the unit, not its programs. The operating principle is direct: Units whose policies, procedures, governance, administration, staffing, and other resources meet the standards will be able to hold all constituent programs accountable. Thus, standard after standard begins, "The unit ensures..." or "The unit makes certain..."

KNOWLEDGE BASE STANDARDS FOR PROFESSIONAL EDUCATION

With an understanding of the concept of unit accreditation and the relationship between the standards and the criteria for compliance, we are in a position to consider the knowledge base standards themselves. This section of the chapter and the next present and discuss each of the knowledge bases and related standards and the appropriate criteria for compliance. The remainder of this chapter should be read with a copy of the standards and criteria for compliance at hand *(inside back cover)*.

Prefatory Note

As noted in the Introduction, each standard is not treated here in an equally thorough fashion. Extra attention, for example, is given to *Standard I.A: Design of Curriculum* and *Standard I.B: Delivery of the Curriculum*, because the first is central to knowledge base concerns and the second will raise unit consciousness about knowledge base content, issues, and implications. However, units ought to subject each of the standards to equally thorough explication. The fuller treatments here may serve as models.

Standard I.A: Design of Curriculum

> The unit ensures that its professional education programs are based on essential knowledge, established and current research findings, and sound

> professional practice. Each program in the unit reflects a systematic design with an explicitly stated philosophy and objectives. Coherence exists between (1) courses and experiences and (2) purposes and outcomes.

Five criteria for compliance are identified. They refer to the "models" guiding programs; the breadth of the knowledge bases; the complementarity of general, specialty, and professional education; specific ways in which the programs reflect the knowledge bases; and faculty collaboration in program design, delivery, and evaluation.

The standard requires *units* to offer evidence that they hold their programs accountable for being informed by knowledge from the several different sources pertinent to professional practice in education: scholarship, practice, and research. Units whose programs are informed by knowledge bases will display that characteristic in the coherence and completeness of their program design. Units will show it in the clarity of their understanding and definition of the roles for which they train. They will have a particular conception of a role (i.e., "model," "systematic design," "explicitly stated philosophy and objectives") in terms of which the discrete pieces and parts of the overall curriculum design articulate and cohere with one another. It says that, given the many different academic and professional specializations requisite as curricular resources for professional preparation, the unit assures that a genuinely collaborative process will characterize the conceiving, executing, and assessing of program performance. Units so characterized will display that fact in a variety of ways: by what students do, how syllabi look, the manifestations of course design, and so forth.

How can units achieve these aims? What are the signs that they are successfully meeting this standard? Illustrating that all programs have such characteristics is not enough. The unit must also show what it is doing as a unit to create, maintain, and, if necessary, restore programs to conditions of quality respecting knowledge bases and curricular design.

Units should be able to demonstrate their performance relative to this standard in terms of their governance and administrative processes, their scholarly breadth, and the activities and expectations of their students. First, the unit must demonstrate governance and administrative procedures that assure compliance with the standard:

- Are the procedures and criteria employed within the unit by its academic program or curriculum review committees in the conduct of their work fully compatible and congruent with the intent of this standard? Are, in turn, the guidelines for submitting program curricula proposals aligned with those procedures and criteria?

- What expectations for scholarly documentation of curricular proposals are defined? Is everyone adhering to these expectations in practice?
- Are programs (as contrasted, perhaps, with individual course proposals) routinely and periodically reviewed?
- Is breadth of knowledge foundations (i.e., from research, scholarship, and the "wisdom of practice") expected in program review criteria and demanded before approval?
- Does the unit oblige each program to define its guiding model, philosophy, and objectives? Are the models thus defined applied in practice as part of published program descriptions, advising guides, etc.?
- Are program proposals expected to demonstrate the coherence among general, specialty, and professional studies? Are criteria defining acceptable levels of program coherence explicit and in evidence? What accountability mechanisms are used to assure implementation of programs as presented and approved?

As Linda Darling-Hammond has said, "The foundation of a profession is not permission to practice autonomously, it is shared responsibility for collectively shaping standards of professional practice."[4] In the knowledge base context, therefore, essential features of a unit's professional obligations are the mechanisms employed to assure collaboration by all appropriate faculty in the design, delivery, and evaluation of curriculum. The use of qualified faculty in the design and delivery of a curriculum must be a given; the engagement of the entire local collegium to assure the overall adequacy of the scholarly underpinnings of a program is another matter:

- Do unit approval processes give promise that all appropriate scholarly expertise is applied in the assessment of curricular proposals and of program operation?
- Are professional preparation programs inside and outside the unit subjected to the same collegial review processes (i.e., is there assurance that the full range of professional expertise is routinely applied to all professional preparation programs in education regardless of where they may be housed)?
- Is there evidence that the faculty and the unit are alive with scholarship and that the faculty are attuned to what is happening nationally in the scholarly and professional communities?

- Does the diversity of the advanced preparation of unit faculty match the breadth of the knowledge bases manifest in the programs offered by the unit?
- Does the unit actively reflect on its own program performance and inquire systematically into the match between its purposes and outputs (i.e., are the unit's formative and summative evaluation activities comprehensive and healthy)?
- Does the unit provide for continuing faculty development?

A third set of indicators, after governance and administrative processes and the scholarly breadth and health of faculty, concerns the activities and expectations of students:

- Are intellectual demands placed on students in their course and clinical work commensurate with the sophistication of the extant knowledge bases—academic, professional, and practical?
- Do admissions, performance, and graduation standards reflect intellectual expectations for students?

Those familiar with the comprehensive set of NCATE standards will recognize that the three sets of questions reflect the conviction that the knowledge base standards form an interlocking web with the mutually supportive concepts and categories of unit and faculty responsibilities expressed in other standards.

There are two implications of this first standard that merit further comment. The first implication addresses the delicate question of the collegial governance of professional education programs housed outside the teacher education unit. There may be sound historical and curricular reasons for the existence of such arrangements and for continuing them. What this standard clearly expects, however, is that the entire professional faculty of the unit will exercise its responsibilities over the design, delivery, and evaluation of professional education programs. Working out the specifics will vary from campus to campus. Programs removed from the teacher education unit will undergo dual reviews, one in their home unit and the other by the prime teacher education unit.

A second implication of this standard is the certainty of conflict and struggle within the unit. The stimulus for battle comes from several obligations: to define the model of professional role guiding each program's curriculum design; to provide for collaborative review embracing all the professional faculty; and to create systematic designs and coherence between learning experiences and program purposes.

An example may be helpful. A faculty member with a science background in the elementary program who teaches the introductory course on instructional methods believes that the purpose of preservice preparation is to focus on the intellectual tasks of teaching as they ought to be performed by fully functioning teachers. The emphasis should be on higher-order curricular planning, evaluation, and instructional decision-making skills. A second faculty member, who teaches the second course in the instructional methods sequence, believes that the task of preservice preparation is to enable teachers to survive their first year on the job. Accordingly, she emphasizes here-and-now, practical suggestions on what to do.

The two approaches need not be incompatible; in fact, they might be complementary. In the absence of careful consideration, decision making, and design, however, the likelihood that they will be complementary is slim. There are three possible outcomes of a formal consideration (which, incidentally, must go beyond the two faculty involved, because the instructional and program interests of all the other faculty are also implicated). One would be an agreement that allows them to continue to teach with complete autonomy. Such a decision could hardly be considered an acceptable professional solution. If curricular and instructional processes have no broader sanction in the collegium than that of individual autonomy, the foundations of teacher education's institutional legitimacy and authority are empty. A second outcome would be a collegial decision to adopt one purpose or the other. Such an outcome, obviously, has profound implications for the faculty member whose view is rejected. The third possibility is that a reasoned and balanced synthesis embracing both views is adopted and then systematically reflected in the program description and the context established for students as they complete instructional segments of their program that might otherwise appear contradictory.

There are no easy paths to fulfilling the obligations of knowledge based program design. Positions will be advanced; exceptions will be taken; attempts to persuade will occur. The effort to achieve consensus will take considerable time. Accordingly, any unit that appears to sail smoothly and/or swiftly through these waters had better carefully reconsider whether it has done what it needs to do.

Standard I.B: Delivery of the Curriculum

> The unit ensures that knowledge bases and best practice in professional education are reflected in the instruction offered. The instructional practices and evaluation are fully congruent with the current state of knowledge about curriculum design, instruction, and evaluation.

Four criteria for compliance address the congruence of faculty instruction with best practice and established and current research, the provision of systematically varied models of instruction, the reputation of the unit for superior instructional practice, and the existence within the unit of a rigorous instructional quality-control mechanism.

At its heart, this standard obliges professional preparation units and their faculties to practice what they preach. It requires them to display fidelity between their own clinical practice within the unit and the pedagogical knowledge that the unit seeks to impart to its students. Full congruence may be defined as a complete match between a unit's practices and the knowledge bases and precepts of best practice that teacher education seeks to impart.

This standard may require the most universal effort within the teacher education establishment. The effort to meet it will have the single most profound overall positive impact on teacher education's work and credibility. The treatment here, therefore, of the meaning and implications of this particular standard will be extensive.

The norm embedded in this standard is professional consistency: Those who prepare others for practice ought to carry out their responsibilities in a fashion consistent with the basic norms, specialized knowledge, and collegial responsibilities of the profession. As we carry out our instructional responsibilities in the preparation of teachers, our teaching ought to embody the principles of best practice that we seek to pass on to our students. In the past, this has been expressed as an injunction that teacher educators should model best practices, and the expression of that concern continues in the criteria for compliance; the formulation in the standard, however, reaches a new high in the expectation of "full congruence."[5]

The concept of full congruence for teacher education has an instrumental value as well. To the extent that instructional practices in the unit routinely and universally represent best practice, the medium becomes the message. The whole teacher education experience constitutes continuous socialization to the norms, expectations, and practices of the profession.

Requirements for Full Congruence. The concept of full congruence has several implications for teacher education units.

Awareness of Best Practice. To display congruence between its own practices and the professional demands for quality instruction it seeks to make of its students, a teacher education unit must be aware of best practices at all instructional levels, as well as of current debates about such matters.

Being aware of best practices means not only knowing *what* but also knowing *why*. It means being informed about ongoing controversies about

effective teaching. It means having, as a unit, come to a decision either to include or to exclude competing points of view about best practices.

Awareness of best practices is not assured by their mere presence in the behaviors of faculty in a teacher education unit. Organizationally, the unit must be self-conscious about them. Without unit self-consciousness, there can be no guarantee that the aim of full congruence has been a guide to program design, operation, and evaluation. Unless the awareness is self-conscious, there can be no guarantee that its presence is not accidental and, therefore, essentially a-professional.

A Professional Responsibility Requiring Unit Expression. Defining best practices is the collegial responsibility of an entire profession. Best practice must be thought of, not in terms of a single hospital, a single firm, or a single school, but in terms of the standard defined by the larger professional collegium. In the case of teacher education, that collegium includes the organized profession, teacher educators, and the research community developing knowledge bases pertinent to professional practice. Although the teacher education collegium at present may not have achieved the kind of conceptual and professional unification that it ultimately must, if teaching is to achieve professional status, signs that such progress may now prove inexorable can be seen all about us.[6]

Just as defining best practice is not the province of teacher educators alone, *achieving* full congruence in a teacher education unit is not something that a single individual or subsegment of the larger entity can, in isolation, accomplish. Best practice in a unit is not molecular in character; it is molar. That is to say, achieving it is not simply a function of assuring that each faculty member in each teaching situation does what needs to be done within the bounds of that circumstance. It requires that each teacher *can* do what reasonably needs to be done. To be able to say that the teacher *can* do this implies adequate conceptualization across the whole, provision of needed resources, and a facilitative organization. All pieces of the teaching unit must be in synchronization. This means the participation of all, not just a few. It means participation as an entire unit, not just the accidental aggregation of individual efforts.

The unit as a whole must give expression to the idea and must define, implement, and monitor compliance. It may be useful to note here that unit responsibility requires the organizational manifestation of the concept of collegiality. This means that existing governance (policy development and accountability) and administrative (policy implementation) mechanisms must attend to these matters or that new mechanisms must be created to handle the responsibility.

Cohesive and Comprehensive Design of Programs. Full congruence is a comprehensive and holistic concept. Poor or incongruent practice anywhere in the program violates it. Its fulfillment means that program design and implementation must have internal unity, a reflection of the importance of the "model" and "systematic design" language of *Standard I.A*. All the pieces of the professional program must be engaged. All dimensions of that engagement must be coherent with one another.

Explicit Image of Teacher. A unit cannot display congruence between its own teaching and what it seeks to impart to the teachers it prepares unless it has made explicit a well-articulated concept of *teacher*. Each teacher education unit *implicitly* defines what it means by *teacher* by the sum and substance of the programs it mounts. This is just another manifestation of the old notion that, *de facto*, the *operations* are the policy.

An example illustrates the point. A program might espouse a belief that a teacher is not a rule applier but is, rather, one who plans, designs, senses cues, decides, improvises, and acts. If the program students undergo, however, rarely provides opportunities for them to engage in such behaviors or does so in a fashion that clearly *directs* and *controls* these actions, rather than *elicits* and *expects* them, there is inconsistency between curricular-design/instructional-practice and program aims—that is, an absence of full congruence. The concept extends very broadly, therefore, as Spodek noted,[7] not just to instructional practices narrowly conceived but to the ideology or educational view underpinning teaching as well.

Issues and Problems in Achieving Full Congruence. It is no secret that current teacher education programs imperfectly reach the state of full congruence. Whenever an obvious professional obligation lies so uncertainly fulfilled, important forces must be working against it. The forces must be searched out, examined carefully, and then neutralized. Some of those forces are described below.

Tension with Other Professional Norms. Among the forces working against full congruence may well be other professional norms. For example, if past experience with competency-based teacher education is any guide, the professional norm of academic freedom is almost certain to be invoked against some of the implications of the concept of clinical fidelity or full congruence. To the extent that the invocation is not effectively countered, it will operate against the aim.

The argument will be put forth that in higher education, under the principle of academic freedom, each faculty member has the absolute right to

decide not only what is taught but how it is taught; no one other than the individual faculty member has responsibility for what is done in his or her class.

Such a posture betrays a fundamental misunderstanding of the concept of academic freedom, originally developed to protect faculty members' rights to decide what to study and to be able to publish the results of their work without fear of economic or political retribution. It also reflects a significantly underdeveloped sense of membership in and responsibility to the local institutional collegium as well as that of the larger education profession. In fact, no faculty member has ever had an absolute right to decide instructional modalities. For example, in their teaching responsibilities, faculty members have been, and will continue to be, subject to the collegial understandings and agreements (implicit or explicit) applied to the segments for which they have been delegated individual responsibility. This is especially the case in the teaching performed for groups of students in service to ends that the faculty as a whole have determined.

Potential for Conflict within the Cultural Ethos. Supervision of instruction in higher education is generally nonexistent. It is simply *assumed* that instruction is proceeding effectively and as it ought. Serious attention to full congruence will juxtapose new mechanisms and actions alongside the long-established patterns and expectations of autonomy and instructional independence.

A further challenge to the existing ethos will be found in the shift of focus that will take place as examination of teaching expands from its present focus—the processes of reappointment, promotion, merit pay, and tenure—to include a new one: a curricular and instructional obligation applied to entire professional preparation programs. To the extent that the character and quality of instruction have been assessed almost exclusively in a faculty personnel evaluation context, all sorts of "baggage" exist that will arouse great sensitivity and some fears. As we work to expand the focus of instructional evaluation, the baggage must be kept in mind, or it will loom large in the list of impediments to success.

Potential for Conflict over the Definition of Best Practices. As long as faculty feel free, under all circumstances, to choose their own instructional approaches, conflict over best practices is relegated to a debater's issue. Once professional preparation units assume responsibility for delivering their instruction under the overarching framework of the concept of full congruence, however, discussion and debate will come to focus on an evolving, reasoned consensus about best practices. No longer will individual faculty members enjoy the luxury of independent disputation about such matters; as a group, they will be obliged to establish policy and standards of evaluation and to perform

accordingly. What shall we seek to display? How much of it? Where in the overall program? In what sequence? Real choices will have to be made, validated, acted upon, and monitored.

Some of the differences in view over best practices can be accommodated by following the principle of systematic variation in direct response to the second criterion for compliance under *Standard I.B.* Rather than trying to resolve the conflict, the practice of reflecting diverse approaches can be followed. If diversity is a result of deliberate and reasoned decision, accepting it would be a responsible posture. Some of the conflict, however, may not be resolvable in that fashion. The debate—reflecting in some instances a situation of opposing premises, judgments, or educational world views, rather than merely a desire to represent diversity—may raise the issue of inconsistency in the messages of the overall preparation effort. Similarly, certain instructional practices may well be inconsistent with the model, theme, or systematic design chosen to guide a program.

The debates thus engendered may be new ones within teacher education units. In most instances they have been sidestepped; individual faculty have been permitted to reflect their own views. The new debates will directly affect everyone in the unit. A real danger to be avoided is an unconscious conspiracy *not* to pursue the matter because everyone is implicated; thus, it would be easier just to evade the issue.

The Localized Distribution of Knowledge about Best Practices. Everyone cannot know everything. A mature and healthy profession is characterized by differentiation and specialization. Even if we cannot claim to be the equal of the so-called "noble" professions in the extent, depth, and sophistication of our knowledge bases, recent volumes compiling and codifying the knowledge bases for effective teaching, schools, and teacher education suggest that there is, indeed, much to know.[8]

It would be too much to expect every faculty member in a department, school, or college of education to be a full peer of every other with respect to the many elements embraced by the concept of best practices or the research on effective teaching and schools. It is likely that such knowledge will be localized in several places in the unit, most notably, perhaps, where the teacher education, curriculum and instruction, or supervision specialties are housed.

Thus, there is a need for periodically sharing new knowledge about such matters with the rest of the unit and also for making the kinds of revisions in instructional practice suggested by what the profession newly has learned. Clearly, therefore, full congruence as a concept implies continuous faculty development and instructional program review, and periodic instructional revision.

Balancing the Model Teacher with the Model Teacher Educator. The concept of full congruence for professional preparation in education embodies a built-in conflict. We are going to have to wrestle with differences between teaching young adults with relatively homogeneous goals and teaching very diverse children and adolescents. Teaching in the schools is not the same as teaching in a college or university. Education students are not the same kinds of learners as the children and adolescents of school age for whom they will ultimately be responsible as educators. Is the concept of "wait time," for example, as applicable to young adults as it is to children? Should we expect to see the strategy applied in teacher education instruction? Lecture techniques, clearly inappropriate for preschoolers, occasionally may be appropriate in higher education. "Best practice" in these different settings, therefore, may not be the same. A demanding set of decisions, perhaps entailing compromises, will have to be made to assure the appropriateness of the instructional practices in the higher education setting for the adult audiences they serve *and* their congruence or incongruence with instructional practices in lower education.[9]

Resources for Developing, Sustaining, and Monitoring the Commitment to Full Congruence. Achieving and sustaining full congruence will take resources. The principal one will be new demands on faculty time.

The initial demand for time will be substantial—first, for addressing the site-specific implications of full congruence, and later, for faculty development, instructional planning, and governance review of the outcomes of that planning. After the initial resource requirements for design and development have been determined and expended, resources will be consumed at a lighter, but still significant, level for instructional monitoring, periodic review and revision, and ongoing faculty development.

Obviously, more could be said about the resource requirements and the necessary reallocations of faculty time and attention. The changes in the way teacher education faculty will come to do their daily work are analogous to the changes expected in the ways teachers themselves will perform according to the redefinitions of professional image in the past half-dozen years. Productive educational reform is not just about others; it is about us, too.

Recognizing the Instrumental Value of Full Congruence. As already suggested, focusing on the moral power of full congruence in teacher education ought not to obscure its instrumental value. Teacher education students come to programs with 12 to 16 years of exposure to dozens of teachers. Students preparing for teaching have experienced practices that, as our increased understanding about effective teaching leads us to conclude, preparation programs must seek to replace. To the extent that the entire teacher educa-

tion program constitutes an immersion experience in self-consciously determined best practice, the likelihood that the needed transformation can, in fact, take place increases.

Practical Steps That Might Be Taken. A number of steps might be taken that embrace governance, faculty development, and the identification of indicators and sources.

Unit Mechanisms. New governance and administrative structures may be required. Full congruence can only be achieved relative to *all* the instructional components of the professional preparation program. In most teacher education programs, however, responsibility for instruction is, in fact, quite decentralized. While one core group of faculty may be responsible for the elementary certificate and housed in the teacher education or curriculum and instruction division or department, other important teaching may be performed by faculty in special education, educational administration, or educational foundations—all of whom may be in other organizational elements of the professional preparation unit. Achieving full congruence, therefore, will be difficult to accomplish within the confines of the existing organizational and administrative substructures of teacher education units, which are generally coterminous with certification programs and generic support functions (for example, foundations or research). Governance structures, on the other hand, that cut across existing organizational substructures typically do not treat program matters directly. They focus, instead, on policy and on what essentially are gatekeeping functions.

Teacher education units must decide whether new kinds of governance structures to assure full congruence need to be created or whether existing structures can be extended to include the instructional responsibilities of support programs. If the first approach is taken, it will either place more governance demands on faculty or increase the need to move toward more sophisticated, matrix management structures within the teacher education unit, or it will do both. The several support areas of teacher education (for example, foundations or special education) could end up with intolerable instructional demands, especially if the governance solutions adopted do not include a unit-wide examination and resolution of needs. Perhaps other more imaginative and less resource-consuming options will emerge.

Present and Future Faculty Development Needs. Teacher education units should not assume that expertise about effective instruction regarding schools or higher education is either uniformly distributed or that it is deep, even in the places where it ought to be. Even presuming that depth will be found on effective instructional practices for schools in expected places

within the unit, we ought not to be surprised to learn that most of what faculty know about instruction for adults and higher education generally has been acquired *en passant*.

Most teacher education units committed to full congruence will want to offer faculty development programs about instructional practices for both lower (P-12) and higher education. In some measure, the personnel already will be present to perform the task. In addition, there is a substantial body of literature that can be made directly available to the faculty. However it is done, time and dollar resources for these purposes will be necessary. Organizational and leadership energy must be directed to such ends. Little of what we are currently doing can be replaced by these efforts; at present it looks as if a cost will be added to the total effort.

Indicators and Sources. It is useful to imagine what examiners might look for to determine that a unit was striving for—if not fully achieving—full congruence. Among possible indicators and sources might be the following:

Program descriptions might contain material directed to the commitment to full congruence and the mode of its achievement and expression. They might treat the concept as part of the "contract" with students in the program. Part of students' participation in the collegial whole could include routine invitations to participate in quality control by bringing departures from full congruence to the attention of program coordinators.

Individual course syllabi might treat the instructional strategies explicitly, justifying the particular approaches followed given the numbers of students and the purposes and objectives of the course.

Direct observations of instruction across program areas could provide important corroboration of the claims presented in program descriptions and course syllabi.

Student reports of their experiences in individual courses, as well as across programs, could be collected. In time, the *testimony of graduates*, especially in light of their experiences in the schools, could be collected.

A somewhat more elusive, but no less real, indicator might emerge from the *degree of unit self-consciousness* about the importance, scope, and implementation of the responsibility. If full congruence were truly important to the unit, it ought to emerge spontaneously in exploratory conversations about the fulfillment of program obligations to students and to the profession. Two related indicators might well be *recognition of the difficulty of the task* and evidence that the unit displays a kind of continuing doubt over its present status respecting fulfillment—what might be called an aura of *continuous striving*.

In the records of the governance or administrative mechanisms responsible for addressing full congruence, it should be possible to find *evidence of argument* within the unit and *documentation of decision-making* respecting instruction.

Conversation with faculty and students, course syllabi and reading lists, faculty publications, and so on should provide important evidence of whether faculty are *conversant and current with the literature* and the debates about best practices and effective instruction.

Achieving full congruence will be a challenge. It is professionally correct, however, and in its pursuit, much that needs to happen in teacher education will take place.[10]

Standard I.C: Content of the Curriculum—General Education

The unit ensures that education students receive appropriate depth and breadth in an integrated course of study that is offered by faculty in the liberal arts and other general studies. At the advanced level, education students should have a solid grounding in general education that will allow for concentration on professional and specialty studies.

Three criteria for compliance are identified. The first specifies the content domains of general education and calls for a well-planned sequence of experiences. The second identifies general education as an intellectual foundation for professional education students. The third requires collaborative planning and evaluation of general education between unit faculty and those responsible for teaching in the general education component.

This standard addresses one of the enduring problems of professional preparation for teaching. Units are responsible for the coordination of crucial portions of the educational program over which they hold no direct authority. If extensive recent commentary and institutional activity are reliable guides, general education does not always achieve its liberating pur-

poses. When it fails, prospective educators do not acquire the intellectual foundation for later professional and specialty education or practice.

This standard implies that teacher education units should have a clear notion of what they aim to achieve through liberal education. Through explicit collaborative effort with the faculty responsible for providing general education, unit faculty must be able to demonstrate that the general education experience is well planned and that students receive guidance in traversing it.

One of the key concepts of this standard is that of the integrated course of study. It requires that the liberal education experience be well planned and that students be guided in the selection of their courses and exposed to appropriate depth and breadth in their studies. Institutions may well be puzzled by how this requirement is to be met and may feel that the guidance provided by the standard and its criteria for compliance is thin.

The drafters were aware of the considerable and healthy degree of variation among institutions in the goals they have defined for general, or liberal, education. Similarly, they knew that the unique strengths and idiosyncratic characteristics of each campus necessarily have played important roles in defining the specific approaches taken to achieve the general education goals at each site.

On the other hand, student time is a limited resource. The goals of general education, as a foundation for professional and special studies and later for professional practice, are complex and interactive. Faculties have a collegial obligation to exercise their own judgment about such matters and not to let the outcome depend on the abilities of students successfully to integrate their experiences or otherwise make sense of it all on their own. Rather than articulate general education goals or specifics of instructional plans, however, the standards contain concepts such as "integrated," "well planned," and "guided," because such terms are certain to be associated with high-quality responses to general education that recognize its foundational character, the complexity of its goals, the individual differences of students, and the wide variety of approaches that could be taken to achieve its aims.

Standard I.D: Content of the Curriculum—Specialty Studies

> The unit ensures that education students attain a high level of academic competence and understanding in the areas in which they plan to teach or work.

Four criteria for compliance are identified. Specialty studies must be a well-planned sequence, providing for academic, methodological, and clinical

work. The unit should employ the guidelines and standards of the appropriate learned societies in developing the sequence of studies. The specialty studies must lead to mastery of the structure, skills, concepts, ideas, values, facts, and methods of inquiry of the specialty. Faculty from other units responsible for teaching specialty studies should collaborate with unit faculty in program planning and evaluation of specialty studies.

This standard focuses on the subject matter of teaching, as part of the knowledge base that every teacher must master. As in the case of general education, it recognizes that the faculty responsible for teaching specialty studies often will be persons other than teacher education unit faculty. Close collaboration between unit faculty and others will, therefore, be essential.

If this standard focuses on the subject matter of instruction, why wasn't that terminology used? First, there are at least three broad certification areas in teacher preparation—early childhood, elementary, and special education—where the subject matter of instruction does not conform readily, if at all, to the normal disciplinary boundaries of the arts and sciences. Second, the relationship to professional studies for these same areas is so close as to be integral. Distinguishing between the specialty studies of these three teaching domains and their professional studies may well be making a distinction without a difference. Third, it remains important to distinguish between what is done in general education for broad intellectual and foundational reasons and what is done, for example, to equip secondary teachers for their specialization.

The precision of the language in the first and the third criteria represents, for most of those working outside the teacher education unit, a rigorous departure from the old standards. Collaboration between unit faculty and those from other units to assure that the specialty work is well planned and conducive to the development of academic, methodological, and clinical knowledge and that specialty knowledge treats the structure, skills, concepts, ideas, values, facts, and methods of inquiry in the field of specialization will test the capacity of both groups of faculty. Consider, for instance, the implications of the conceptualization of subject matter expertise (specialization) developed in Chapter 3 that defines the knowledge teachers require as including: *(a)* the content (conceived broadly as knowledge, skills, attitudes, and values), *plus (b)* how that content is structured cognitively for the purposes of student learning, *(c)* what curriculum materials are available in that field, and *(d)* the unique instructional requirements of that particular specialization (as contrasted with generic instructional skills). Such an orientation would be impossible without close collaboration among faculty possessing quite different kinds of expertise.

Individual units may want to think about the potential relationship be-

tween specialty studies and the general education purpose of achieving breadth and depth of understanding. Many would list developing an appreciation of the privileges and responsibilities associated with expertise and developing an understanding of the implications that any one individual is unlikely to develop expertise in more than one domain—or at best a very few—as important outcomes a contemporary liberal education ought to seek to achieve. It is difficult to imagine how that might be accomplished without the direct experience with expertise afforded by successful exposure to specialty studies. In this respect, the concept of interrelationships among the standards applies just as much within the knowledge base standards themselves as it does to other standards.

Standard I.E: Content of the Curriculum—Professional Studies

> The unit ensures that the professional studies component(s) prepares education students to work effectively in their specific education roles.

Seven criteria for compliance are listed. Professional studies must be well planned and related to the realities of practice. Courses and experiences must be built upon and reflect defensible knowledge bases. All professional studies components must embrace a specified array of foundational work. They must include attention to communication skills, independent thinking and judgment, professional collaboration and participation, values, and professional ethics. They must address individualization, exceptionalities, cultural diversity, and multicultural and global perspectives. Professional studies components for teachers must address specified professional domains and skills pertinent to teaching.

This standard is the most comprehensive of the knowledge base family. What image of professional role guides the organization of the parts? How do professional studies relate to general education and specialty studies? How do units operationalize the notions of "building upon" and "reflecting" knowledge bases? What obligations does the word *defensible* (as a *modifier of knowledge bases*) place on teacher education units? In terms of the unit thrust of NCATE accreditation, what indicates that the *unit* is assuring that the professional studies component of each program confronts the many concerns identified in the criteria of compliance?

Clearly, this standard is of central importance to the overall NCATE redesign. It asserts that there are professional knowledge bases. It implies that choices must be made among them, even as it precludes some of the choices by specifying the domains that shall be taught. It implies that not

just any choices will do; they must be defensible in terms of frames not wholly specified in the standard.

All the concerns addressed in the first chapter of this monograph come to bear here. What sources of knowledge are appropriate for a unit's several programs? On what basis are choices made, validated, and legitimized? (Implicit in the last point is not only the presence of a rationale for inclusion but also one for exclusion.) In proposing or making these determinations, what roles are assigned to faculty (as contrasted to practitioners and others who, according to *Standard V.A: Governance*, are expected to be systematically invited to offer advice)? In addition to the presence of appropriate knowledge as program content, do the unit's programs reflect aims, rationales, and justifications also defensible from the perspective of existing knowledge bases? How can a unit achieve the rich collegial interaction that assures more than *pro forma* review by faculty and education professionals representing different specializations and epistemological perspectives?

No cut-and-dried answers to these questions exist. Each unit must develop its own versions to reflect legitimate differences of person, place, and history. These are the kinds of questions that must guide unit planning, design, review, and implementation.

RELATED STANDARDS

The concern for bases is present in other standards, in addition to those that come under the "first-family" heading, Category I: Knowledge Bases for Professional Education. In fact, one could argue that every standard is there because of something "known" (for example, without quality students we cannot have quality graduates, and so admissions standards will have to be addressed; or without requirements that programs have clinical and field-based experiences, the likelihood of good linkage between campus-based activities and the realities of practice will diminish). Certain of the standards, however, have an especially close relationship to the knowledge bases. These have been singled out for special treatment below.

Standard II. A: Clinical and Field-Based Experiences

> The unit makes certain that clinical and field-based experiences in the professional education curriculum are designed to prepare students to work effectively in specific education roles.

Nine criteria for compliance are listed, all of which are closely connected to knowledge bases. Units must provide a variety of settings (including those giving access to culturally diverse and exceptional populations) for student opportunities to observe, plan, practice, and otherwise apply the principles

and theories drawn from the profession's knowledge bases. Supervision is to be comprehensive, closely related to program goals, and sequenced to enable students to assume full responsibility for the roles for which they are preparing. Student teaching is direct, substantial, and full-day for at least ten weeks. Sites are carefully selected to be consistent with program goals, and each three-member team composed of student, field supervisor, and college supervisor is carefully and explicitly charged with its responsibilities.

The principal connections between Standard II.A and knowledge bases for professional preparation lie in *(a)* the pedagogical relationship of clinical and field experiences to preparation program design and the achievement of program aims, and *(b)* the extent to which the culminating clinical experience confirms the effectiveness of the preparation program and the worth of its conceptualization. Furthermore, research suggests that poorly conceived, situated, and supervised clinical experiences wash out the beneficial effects of otherwise up-to-date preparation programs.[11] These observations underscore the importance of words like "systematic," "coherence," "explicit," "well-planned," "complement," "congruent," and "integrated" as they appear in the knowledge bases standards.

Standard II.A may be thought of as the place where the two central substantive themes of NCATE's redesign—knowledge bases and the relationship to the world of practice—come together conceptually. Achieving practical expression of that relationship constitutes one of the central challenges facing teacher education. Detailed program goals create equally demanding requirements for students' practicum experiences and the clinical support provided by field- and college-based supervisors. Carefully explicated roles for supervision imply faculty and practitioner training to assure intended performance. The virtual "volunteer" nature of the commitment made by field supervisors has important implications for their recruitment and may well have serious political and interinstitutional ramifications. Finally, the resource demands on college faculty implied by 18:1 student-teacher ratios (Standard V.B: Criterion for Compliance 79) and a minimum 10-week student teaching experience merit careful attention, especially in the face of other academic incentives that may orient faculty attention away from clinical supervision.

Standard II.B: Relationships with Graduates

> The unit maintains relationships with graduates from its professional education programs that include follow-up studies and assistance to beginning professionals.

Three criteria for compliance are listed, two of which have special

connection to the importance of knowledge bases for teacher education. The first obliges units to keep abreast of emerging evaluation techniques and to conduct regular and systematic evaluations, including follow-up studies. The second obliges units to use the results of all evaluations to improve programs.

In Chapter 1, I argued that the commitment to build upon knowledge bases is not just a commitment to a passive state of affairs but is also a commitment to *knowing*—an active, dynamic, skeptical, reflective, inquisitive disposition. This standard is one of five[12] that speak to the unit's obligation to generate knowledge that will directly assist it in the performance of its responsibilities. The obvious importance to a unit of continuously collecting data pertaining to its success in accomplishing its professional preparation goals is reinforced by a "hidden curriculum" message to students and graduates: that systematic inquiry is not only rhetorically or procedurally valued but also is actually conducted by the unit on matters of direct and immediate concern to it.

A vigorous evaluation activity, broad enough to touch all programs and sophisticated enough to be of real use in making program improvements, remains for many institutions an elusive goal. Reasons for this are numerous, and they vary across institutions. For some, lack of the capacity for professional evaluation is the problem. For others, it is motivational hesitation. For many others, the absence of necessary investments in evaluation activities is a direct consequence of the insufficient resources available to teacher education units. This standard aims to keep a unit's attention focused on evaluation as a prime concern.

Standard II.C: Relationships with Schools

> The professional education unit maintains positive working relationships with schools to advance the goals of the profession and to promote the effective preparation of professional educators.

Three criteria for compliance are listed, two of which have special connection to knowledge bases. The unit must cooperate with local schools to encourage practitioners and unit faculty to develop research questions and inquiry strategies to further refine and develop professional knowledge bases. Professional education faculty are expected to be regularly involved in the world of practice of P-12 education.

This standard is the second of five that oblige units to participate actively in knowledge production. It does so in the context of collegial work, with schools and districts cooperating on inquiry and improvement of schools and the profession. Faculty are to maintain direct personal involvement in the world of practice beyond the teacher education unit *per se*.

This standard expresses several of the notions treated in Chapter 1. For example, it speaks to the different epistemological orientations of the academy and the world of practice by obliging faculty in the teacher education unit to expose themselves regularly to the realities of professional practice, thereby assuring direct interaction between the respective frames of reference common to each. It also speaks to the social, collegial, or shared nature of knowledge—the sense that the legitimacy that comes to professional practice through specialized knowledge is a direct outgrowth of the extent to which it is shared. Relating to the world of practice creates awareness of the mutual worth and power—the epistemic parity—of the different kinds and sources of academic, professional, and craft knowledge that effectively can be brought to bear on the problems of practice. Unit interaction with the world of practice also provides opportunities to test the worth and definition of specialized knowledge for providing direct service to the profession. This idea relates this standard to *Standard IV.A: Faculty Qualifications and Assignments*, especially to Criterion for Compliance 55 which speaks to the sense of professional identification that teacher education unit faculty have with the larger teaching profession.

Standard III.B: Monitoring Progress

> The unit has systematic procedures for monitoring the progress of education students from admission through completion of their professional education programs.

Three criteria for compliance are listed, two of which have a bearing on knowledge pertinent to professional education programs. Units must establish systematic procedures and timelines for assessing student progress and must employ consistent procedures and relevant criteria to determine eligibility for student teaching and other internships.

The kinds of knowledge generated by the monitoring obligation (making this the third of the five inquiry-oriented standards) help units assure that what they intend and claim to provide for their students is being done. It helps to assure that a proper sequence of activities is being maintained and that students do not advance to later stages of study or practicum without meeting the prerequisites. The multiple assessments required include objective measures, as well as professional judgments of faculty and cooperating practitioners.

Standard III.D: Completion of Program

> The unit ensures that the academic and professional competence of educa-

> tion students is assessed prior to granting recommendations for certification and/or graduation.

Three criteria for compliance are listed, two of which have special connection to knowledge bases. The first obliges units to assess students' communication skills and their command of specialty and professional studies. The second requires units to use multiple sources of data in assessing students' academic and professional competence.

This is the fourth of five standards defining a unit's inquiry obligations. One important implication for the assessment of graduates arises from the ideas addressed in Chapters 1 and 2 and has to do with the extent to which a commitment to knowledge bases is incomplete without attention to their attitudes and dispositions. A second focuses on program outcomes of teacher education conceptualized as a socialization process.

In seeking to measure attitudinal, value, and socialization aims of teacher education, units assume the technically most difficult of assessment tasks. In addition, focusing on assessment obliges units to go beyond rhetoric in justifying their existence. They will have to specify outcome measures and the processes to assess them. As they do this, they will crystallize perceptions, and the terms of the debate may be sharpened—or they may only increase their awareness of the propensity to sidestep important issues.

The specifics of assessment test our convictions and commitment. The potential for more focused conflict within teacher education is a concomitant of the demand for increased precision of intended outcome. That potential is especially strong in matters of attitude, value, or socialization norms. It is here that we in the profession must explicate the deep societal and precise professional goals that we presumably share in common. And it is here that the prospect for conflict among us may be the most serious.

Attitudinal and valuational intentions of teacher education, especially insofar as they are expressions of professional norms, can only partially and imperfectly be measured through instruments. The assessments involved here are a matter of professional judgment. Their measurement goes beyond ascertaining their presence in one or another segment of the professional training sequence. In addition, it seems especially appropriate for assessment of the achievement of program ends to be a formal collegial responsibility of the faculty.

What evidence would illustrate the fact that graduates of teacher education units reflect the commitment to knowledge based programs and a knowledge based profession? Consider, for example, the following:

Curiosity—Why didn't my curricular plans and design succeed? Or, why was it so much easier than expected? How could it be better done next time?

Reflectiveness—As a teacher, am I still learning so that I continue, for example, to model for my own students? Is this what we're really supposed to be doing or accomplishing? Suppose I changed my frame to that of my students or their parents or the larger community; how would I feel about what I'm doing?

Epistemological "savvy"—How can I reconcile the apparent ambiguities among the sound theory I acquired at college, the realities of my classroom, and the perceptions of my kids' parents?

Problem-solving skills and a propensity to use them—How can I reduce the discrepancies between what I accomplished and what I intended, between what I thought I knew and what the latest scholarly analysis suggests? How do I address this most recent challenge to my professional purpose or authority? What can I do to restore the conditions of practice in my school to acceptable professional levels?

Collegial orientation—Am I making the most of the diverse capacities and specializations of my colleagues? Are my attitudes conducive to collaboration? Do I have the capacities required?

Unlimited positive regard for those whose learning we seek to enhance—Do I display professional "patience of Job" with my clients? Do I avoid putting children down? Do I avoid racism? Sexism? Handicapism? Do I resolutely avoid assertions or manifestations of mere power relationships over children and their parents?

These are examples—prime ones, perhaps—of the types of evidence required. No doubt, others should be added. Simple paper-and-pencil assessments do not measure the presence of this kind of evidence; it is a matter of professional judgment.

The corollary to the attitudinal/valuational/professional-norm nature of these ends and to the judgmental character of the measurement of their achievement is that the mechanisms for assessment must manifest their essentially social dimension. Further, most of these ends can be reached only *across* the specific offerings of the professional training program, not *within* individual ones. They are summative or aggregate outcomes.

The summative nature of the measurement suggests the importance of assessment mechanisms that directly involve panels of faculty and perhaps others to develop and make collegial judgments. It suggests mechanisms that sum across course sequences and across didactic instruction and practicum

experiences. It suggests mechanisms that function as advance organizers that make students aware of these essentially social professional learnings.

Standard IV.A: Faculty Qualifications and Assignments

> The unit ensures that faculty in professional education are qualified to perform their assignments and also reflect cultural diversity.

Seven criteria for compliance are listed, all of which are connected to knowledge bases. The composition of the faculty is to reflect cultural diversity. Faculty should have advanced graduate preparation or demonstrated competence through independent scholarship in each field that they teach. Faculty see themselves as members of the training and research arms of the teaching profession. Faculty with supervision responsibilities have received training in supervision and have had professional experiences in the school setting where the supervision takes place. Part-time faculty meet the same standards as full-time faculty. Graduate students with instructional roles are qualified by virtue of formal study, experience, and training. Cooperating educators are certified for the areas in which they work and have had three years of experience in the areas they supervise. This standard has the most direct bearing on the knowledge base standards. Unit faculty are the locus for the expertise necessary to transmit, broker, or reflect the knowledge bases underlying the content, rationales, and processes of a unit's programs. Furthermore, the attitudes and dispositions toward knowing and knowledge that will make the commitment to knowledge bases active and dynamic reside in the faculty.

From a knowledge base perspective, cultural diversity within the faculty is more than a reflection of the societal commitment of the teaching profession; it is the recognition that the different perspectives of cultural diversity within the faculty are an important part of the epistemological foundations of professional practice. Different perspectives lead to knowing in different ways, a fact particularly relative not only to societal and individual educational goals, but also to certain otherwise-more-technical aspects of the profession, such as instructional design and practice or the management of student and classroom behavior.

Faculty must have "formal advanced study or demonstrated competence through independent scholarly activities in each field of specialization that they teach," that is, for each of the knowledge bases reflected in unit programs. Units where faculty teaching special education courses have taken only one special education course themselves, where those teaching measurement and evaluation have taken a single statistics course, or where faculty teach the history of education after a foundations course taken as part

of their doctoral core will need to evaluate what they have been doing and what they intend for the future. This standard clearly negates any conventions that may have supported such practices in the past.

Furthermore, it makes parity in qualifications requisite across full-time, part-time, graduate student, and cooperating teachers, as well as for field-based supervisors. Units where part-time faculty reflect softer standards or where graduate students perform instructional roles, more in terms of staffing needs than in terms of the qualifications they bring to their teaching or clinical supervision roles, must stop those practices.

In sum, the examiners must find in the qualifications of all those with instructional responsibilities the essential confirmation of the knowledge base commitments reflected in program definitions and rationales.

Standard IV.B: Faculty Load

> The unit ensures that policies allow for faculty opportunities in teaching, scholarship, and service.

All three criteria for compliance listed have connections to knowledge bases. Work load assignments accommodate faculty involvement in teaching, scholarship, and service. Undergraduate teaching loads do not exceed the equivalent of twelve semester hours; graduate loads are not more than the equivalent of nine semester hours. Faculty keep up with research on teaching and professional education and with recent scholarship in the areas that they teach.

A unit's commitment to knowledge bases is to be reflected in the qualifications of its faculty; that commitment also must be demonstrated in its expectations of faculty in their day-to-day work. The presumption is that faculty are fully qualified when they are initially employed. Units will show by their work load assignments whether they realistically expect faculty to maintain and enhance their substantive academic qualifications by opportunities to engage in inquiry and scholarship and in direct professional service. Unstructured time is essential to such reflectiveness, both for individuals and institutions, and to initiatives taken in support of practitioners. Many might argue that the maximum course loads, undergraduate and graduate, permitted by the standards are still in excess of what is reasonable. That is all the more reason for expecting that the standards and criteria will be followed closely.

Standard IV.C: Faculty Development

> A systematic, comprehensive plan for faculty development is used by the professional education unit to provide for faculty development.

Two criteria for compliance are listed, both of which have connections to knowledge bases. Systematic and regular development activities are to be provided for all faculty having responsibilities for professional education programs. Faculty must be involved in professional associations and offer educational services at many levels.

A unit's commitment to building upon and reflecting knowledge bases in its programs implicitly recognizes a continuous need for faculty development. While the expectation of continuous growth always has been a norm for individual faculty throughout higher education, the concept of professional development implies at least some degree of collegial structure and system, even if the larger portion of faculty development remains essentially idiosyncratic in response to individuals' particular academic and scholarly interests. The accountability of teacher education units to the larger profession requires systematic institutional attention to faculty development.

One major focus of unit concern for faculty development is maintaining an awareness of developments in effective teaching in both P-12 and higher education. This focus arises from units' obligations to display full congruence between their own curricular design, instructional, and evaluation practices and those they seek to teach to their students.

Individual faculty involvement in professional association activities ensures their developmental connection to the external reference groups for their specialties. The additional expectation that unit faculty will provide professional services serves two purposes: (1) it recognizes that faculty have a professional obligation to transmit to practitioners the benefits of their own emergent understandings of developments within the profession; and (2) it underscores the importance of the domain of practice as an independent source of professional knowledge and as an arena for validating knowledge developed through inquiry and scholarship beyond direct practice.

Standard IV.D: Faculty Evaluation

> The unit implements a faculty evaluation system to improve faculty teaching, scholarly and creative activities, and service.

All three criteria of compliance listed have connections to knowledge bases. Faculty are evaluated on the basis of their teaching, scholarship, and service. Competence in teaching is evaluated through direct measures of teaching effectiveness. The evaluations are used to improve teaching, scholarship, and service.

This standard is one of the five that oblige the unit to engage in inquiry aimed at assuring accountability for improving its performance. The standard makes clear the belief that teaching, scholarship, and service are of equal

standing in assessing the worth of faculty performance for salary, promotion, and tenure decisions. Furthermore, individual decisions respecting faculty are not the exclusive focus of this evaluation concern; the unit's focus on improving teaching, scholarship, and service also is explicit.

Standard V.A: Governance

> The governance system for the professional education unit ensures that all professional education programs are organized, unified, and coordinated to allow the fulfillment of its mission.

Nine criteria for compliance are listed, six of which have connections to knowledge bases. The unit must exercise its policy responsibilities for governance, programs, admission and retention of students, and faculty resources. It makes decisions affecting professional education programs. It identifies, develops, and uses appropriate resources. It maintains appropriate linkages within and without the institution. It has a long-range plan. It involves teachers, students, and professionals in its policy and program development.

The relationship of the governance standard to knowledge bases arises from the rationale underpinning NCATE's decision to move to unit accreditation. The concept of unit accreditation arises from the notion that each profession is a collegium—that its foundations lie, in Darling-Hammond's previously cited works, in "shared responsibility for collectively shaping standards of professional practice."[13] As collegiums, professions derive their definition from interactions between two factors: first, the specialized knowledge that informs them, and second, their unifying concept (usually a set of values that represent the good they seek to do for society). The policy decision to focus on the unit arises from the conviction that, to enhance the status of teaching and teacher education, NCATE's accreditation standards must cause institutions to act in ways that fully express the totality of the profession's academic collegium. Those who produce, confirm, or seek to pass on professional knowledge must cohere with, interact with, decide, and hold accountable their several pieces and parts.

The policies, procedures, and mechanisms a unit employs to meet the governance standard relate to knowledge bases to the extent that they assure exposure of unit policies, procedures, and programs to the full range of expertise reflective of teaching and teacher education's knowledge bases. The governance standard does not require establishment of a particular administrative structure. NCATE's standards do not require that all professional education programs reside in the same administrative unit. Indeed, the fact that they do so is not a guarantee that the intent of the standard is met. One could easily imagine an administrative entity that housed all the profes-

sional education programs under its roof but that functioned in such a way as to ignore the concept of professional collegium and was, therefore, operationally and professionally not a unit at all, in NCATE's conceptual sense. The standards and the assumptions underlying the shift away from program accreditation oblige faculty in a unit to function together, bringing to bear the diverse perspectives and epistemological authority of their specialized professional knowledge.

Standard V.B: Resources

> Resources are available in the areas of personnel, funding, physical facilities, library, equipment, materials and supplies that allow the professional education unit to fulfill its mission and offer quality programs.

Eighteen criteria for compliance are listed, seven of which have connections to knowledge bases. Sufficient numbers of faculty and cooperating teachers must be available for the unit's programs, and each doctoral program must have at least three full-time faculty who have earned their doctorates in that field. Resources for clinical supervision should not exceed a ratio of eighteen full-time equivalent students for each full-time equivalent faculty member. Support for faculty development is to be equivalent to that for other units on campus. Financial support for books, periodicals, and similar resources must be adequate. Library holdings are of adequate scope and are regularly reviewed as a basis for acquisitions decisions; an identifiable and relevant media and materials collection is accessible to students and faculty.

This standard and these criteria are directly related to the thrusts of the standards already addressed. For example, if a unit commitment to faculty development is to have meaning, resources will have to be provided. If they are not, then the commitment is only rhetorical. Similarly, a teacher education unit can hardly claim to have a connection to knowledge bases without making a serious and sustained financial commitment to collect scholarly books and journals for the library, as well as curriculum and other media samples representative of current practice in the nation's schools.

It is important to recognize the qualitative, knowledge based underpinnings of two of the key (though transparently quantitative) faculty resource standards. For example, the requirement that units have sufficient numbers of faculty and field-based supervisors of practicum is more than a concern for faculty load in the context of teaching, scholarship, and service expectations for individual faculty. It is also a reflection of the expectation in *Standard IV.A : Faculty Qualifications and Assignments* that all faculty will have "formal advanced study or demonstrated competence through independent scholarly activities in each field of specialization that they teach." Similarly, the 18:1

ratio requirement for faculty responsible for practicum supervision is more that a "comfort-index" concern for faculty. It is a direct expression of *(a)* the knowledge of the complexity of such supervision; *(b)* the time demands that supervision place upon faculty if it is done with a full awareness of the intern's intent, close and systematic observation of performance, and opportunity for a full analysis of the experience and a debriefing afterward; and *(c)* the importance of intimate knowledge about student performance in these capstone experiences as a basis for evaluation and continuous revision of the program.

A METAPHOR FOR THINKING ABOUT KNOWLEDGE BASES AND PROGRAMS

The preceding commentary demonstrates the complex, interactive way that the concept of knowledge bases runs through the standards as a whole.[14] Its impact is not confined to the family of standards under the heading Knowledge Bases for Professional Education. Instead, the concept operates as a kind of theme that permeates the standards.

Questions raised in NCATE orientations and AACTE knowledge base workshops, however, indicate concern that the emphasis on knowledge bases is inexorably driving the profession toward a single training model. The diversity of the scholarship, research, and wisdom of practice that constitutes the knowledge bases for the profession, however, makes such uniformity unlikely. That great diversity can be thought of as a kind of seamless web; however, the experience of watching a group of neighborhood children playing "cat's cradle" with a closed loop of string suggested to me a metaphor that may help with interpretation.

The seamless web of knowledge pertinent to professional practice and preparation bears the same relationship to possible configurations of professional preparation programs as the single loop of string bears to each of the configurations (for example, "broomstick," "Jacob's ladder," or "mouse whiskers") that children learn to construct with that loop. The form of the knowledge base remains the same but its orderly manifestations can vary enormously. The challenge facing each unit is to build preparation programs that reflect the shared knowledge bases of the larger profession—even as they constitute formulations expressive of the unique configurations of human, historical, and contextual resources present in each of our units.

NOTES

1 The entire Unit Accreditation Board (UAB) was not trained because the principal business at the September 1987 meeting was to act on a full set of institutions whose accreditation decisions were being completed under the old standards. Fairness to those institutions dictated not training the entire board lest inadvertent comparison against the new standards occur.

2 The effort to be meticulously fair during the developmental process means that the UAB, in fact, must undergo two separate training efforts. The first considered the language of the October 1985 standards document. That language has governed the accreditation quests of the pilot institutions. When the pilot institutions all have been reviewed, the UAB will undergo a second round of training to familiarize itself thoroughly with the December 1987 edited version of the standards.

3 This monograph, too, should be considered an outcome of the developmental intention, since the idea for it dates precisely to the thorough debriefing following the September 1987 UAB meeting.

4 Linda Darling-Hammond, "Schools for Tomorrow's Teachers," *Teachers College Record*, vol. 88, no. 3 (Spring 1987): p. 356.

5 In an article parallel in its thrust, Bernard Spodek concludes, "Programs of teacher education would need to be consistent in educational view with the programs of childhood education to which they would be related" (Spodek, "Early Childhood Education and Teacher Education: A Search for Consistency," *Young Children* [March 1975]: p. 173). More recently, President Derek Bok of Harvard University addressed this concern when he wrote: "In my opinion, an equally important reason [for the marginal status of education schools, the lack of respect from the rest of the university, or the low estate of the teaching profession in our society] has been the failure of education faculties to practice what they preach. Rather than imitate their colleagues in arts and sciences, they should strive to exemplify the highest standards of instruction and to come forth with challenging new ideas about better methods of instruction, better ways of assessing student progress, better ways of helping those who find it difficult to learn. It is by serving as an example of good practice and a catalyst for educational reform that schools of education are most likely to attract greater respect and attention within the university as a whole" (*The President's Report, 1985-86* [Cambridge, Mass.: Harvard University, 1986]: pp. 36-37).

6 For example, the addition of the American Federation of Teachers to the governance of NCATE, the creation of the National Board for Professional Teaching Standards, the equal importance of knowledge bases and the relationship to the world of practice in the NCATE standards, the central themes of the Holmes Group initiative, and so on.

7 See note 5.

8 Again, see the citations in Chapter 2, note 10.

9 It may be incumbent on teacher education faculty to point out explicitly the dissimilarities, wherever they occur, as a way of cautioning students where the models are inappropriate. This requires a finely tuned sense of awareness of the knowledge about effective instructional practices for different student populations.

10 An earlier version of this section on full congruence was written two years ago

and published in the *Journal of Thought* (vol. 22, no. 2, Summer 1987) under the title, "The Moral Obligations and Implications of Clinical Fidelity for Teacher Education."

11 For example, Kenneth M. Zeichner and B. Robert Tabachnik, "Are the Effects of University Teacher Education 'Washed Out' by School Experience?" *Journal of Teacher Education*, vol. 32, no. 3 (May-June 1981): pp. 7-11.

12 The other four are Standard II.C: Relationship With Schools; Standard III.B: Monitoring Progress; Standard III.D: Completion of Program; and Standard IV.D: Faculty Evaluation.

13 See Chapter 3, note 4.

14 See Appendix 1 for three other themes that also permeate the standards.

CHAPTER 4

What Can Units Do?

Unit initiatives to assure success when measured against NCATE's new standards will vary greatly depending upon circumstances, ethos, traditions, attitudes, and personnel. While a section on what units can do may risk insensitivity to and ignorance of local circumstances, the frequency of the requests for counsel make it worthwhile to suggest a few of the many things units can do.

The single most important caveat is that referenced in chapter 3: NCATE's redesign thrust focuses on the teacher education *unit*; it focuses on programs only to the extent that their health is a result of the integrity and quality of the unit as an administrative, intellectual, and collegial whole. That does not mean that programs are unimportant or secondary. What it means is that NCATE will look for and make judgments on evidence that gives confidence that *units* as a whole are concerned about and responsive to the matters addressed in the 18 standards and 94 criteria for compliance.

The quandary some faculty will feel over what it takes to respond to the standards may arise from recognition that individual faculty have little direct responsibility for many of the matters addressed. Some of the unease may arise from tacit recognition that the interconnections among standards illustrated in chapter 3 make identification of starting points problematic. Part of it, no doubt, arises because the standards represent a new and higher benchmark and are, as well, a departure in both thrust and process.

In any case, the quest for counsel on what units can do to address NCATE's redesign has swelled the ranks at the NCATE orientation sessions and the AACTE knowledge base workshops. Making at least a few additional comments on starting points for consideration seems to be a good idea.

A BEGINNING DISTINCTION

It is useful to distinguish among three kinds of activities—self-study, unit or program development, and preparation of the institutional report.

Self-study—the examination of current institutional and programmatic health against accreditation or other kinds of standards that might be envisioned—must be analytic, appraising, and reflective. Its worth depends on the quality and quantity of the empirical evidence it uses. While a small group can undertake the activity, its results require the attention of the faculty as a whole. Self-study is *not* the same thing as producing an institutional report for accreditation purposes.

The second kind of activity is unit or program development. This can be as comprehensive as rewriting a unit's bylaws or completely restructuring a program for preparing teachers, or it can be as particularistic as ensuring that syllabi exist for all of a unit's instructional offerings. As these examples imply, it may be necessary, on occasion, to develop materials or structures in order to conduct a self-study, because what is not there cannot be appraised. All development tasks in professional preparation units, aside from those that are almost purely administrative in character, require the iterative engagement of the entire range of faculty expertise reflective of the profession's knowledge bases.

The collegium must participate in the definition of initial specifications for development. Depending on what those specifications are, appropriate or representative faculty then must undertake the tasks of construction. At midpoints along the way and at the point of apparent completion, the collegium must assure itself, through careful review, that the original specifications have been met and that no unanticipated problems or concerns have arisen in transit.

The concept of development is a logical concomitant of the commitment to ground professional preparation on the relevant knowledge bases. In other professions, *development* (as in research and development) is the term used to name the processes by which individuals and groups use design skills and expertise to create systems, techniques, or structures to achieve specified ends. It is appropriate to use the term in the same sense here.

The third activity is the preparation of the institutional report. Undertaking a thoroughgoing self-study and preparing an institutional report are not the same. The second may arise from and follow the first, but they are fundamentally different. Preparation of an institutional report depends on self-study, and units may want to undertake some kind of development activity as a foundation for an ensuing institutional report, but the three activities remain distinct.

CHANGES IN NCATE'S REVIEW AND MONITORING PROCESSES

NCATE's review and monitoring processes have undergone significant changes. In the past, they might have been most aptly described as episodic; under the redesign, they may more accurately be termed continuous. Requirements for annual reporting, for the submission of preconditions documentation 15 to 18 months before a proposed initial on-site visit, and for the completion of institutional reports according to a five-year cycle will coalesce to make the NCATE of the future a far more continuous presence in a unit's professional existence than in the past.

At first, that continuous presence may feel uncomfortable. Over time, however, it should lead to individual and institutional behaviors that will make the undertaking of self-studies far simpler, and that will keep the level of a unit's self-consciousness and reflectiveness about its responsibilities high.

EXISTING DOCUMENTATION FOR SELF-APPRAISAL

Teacher education units have existing documents that can serve as starting points for a number of different kinds of analyses required in any comprehensive self-study. Among those documents are:

- minutes of governance bodies (for example, faculty senates, executive committees, standing committees of the unit, and so forth)
- course syllabi
- program descriptions (for example, for student recruitment, for purposes of internal academic program review or course approval, for state program approval, and so on)
- advising guides
- the last NCATE institutional report
- policies and procedures manuals
- policy study reports (for example, results of evaluation studies; special study reports [on topics such as skills testing; documents like "Profile of a Beginning Teacher," "Extended Programs for Teacher Education," *Tomorrow's Teachers*, NEA and AFT statements on teacher education; or problems of clinical supervision]; unit or extra-unit program reviews, and so forth)
- catalogs and bulletins
- unit mission statements
- unit bylaws and descriptions of governance and administrative structures
- comparative data profiles (often available from institutional research offices)
- student body profiles (often available from the registrar)
- faculty vitae
- space and facilities configurations

- cooperative agreements for clinical and field experiences

Part of the enormous effort associated with self-studies and preparation of institutional reports in the past has resulted from a lack of precision and regularity in the preparation of essential documentation. Instead of being able to draw something current from existing files, institutions have had to prepare new materials. A related matter has been the extent to which units have prepared documentation with only unitary or immediate purposes in mind rather than multiple and long-range aims—for example, an advising guide prepared to assist students also might have served as one more manifestation of a program's orientation to knowledge bases.

Failure to conceptualize different purposes for documentation may not be the most powerful explanation for shortfalls in its preparation or availability. Rather, units have not been creative in instituting relatively innocuous, day-to-day mechanisms or habits that do the job. For example, units can maintain a current syllabus file by requesting that faculty routinely turn in the syllabus associated with each offering of a course or section along with the completed grade sheet. Maintenance of a centralized, continually updated syllabus file folder is then a simple matter. Faculty quickly get into the habit of attaching syllabi to their grade sheets; following up on the forgetful is a relatively small problem.

Similarly, performing some kind of annual review of individual faculty virtually is standard practice now within departments. Often, this is done in connection with planning the coming year's instructional assignments. Requesting two copies of an updated vita at that time each year facilitates such reviews and assures the maintenance of a current, comprehensive departmental and college vitae resource. Furthermore, the nearly universal availability of word-processing technology makes the maintenance and production of current vitae a simple task. Finally, the importance of a current file of vitae for making judgments about possible faculty development needs on a unit-wide basis is apparent.

Somewhat more problematic is the task of keeping track of the documentation of the operation of collegial processes or governance actions. Most units have difficulty maintaining such files, because shared faculty responsibility for such matters assures regular turnover of the governance assignments. Idiosyncrasies in personal style in and attention to record keeping and the dispersion of committee chairs throughout the unit's building(s) add to the problem. The solution is not so much to centralize control of the processes as it is to assure at the unit level that, in the first place, records are generated and that second, they are kept accessible to all who need to know or are interested.

The point of creating and keeping such records is not just to be able to show them to NCATE Boards of Examiners, although that certainly would be helpful. It is to establish the progress of collegial actions, against which new or continuing faculty can measure their own participation in the larger enterprise. For example, the participants in a closely argued debate about the structure of the history major for purposes of defining the specialty study or about the development of an agreement on the content and instructional processes of a core sequence of educational foundation offerings presumably will know what they covered and agreed to do. But the faculty who come later will need to know what was treated, what was agreed, and why. In short, the understandings must be established for both internal and external accountability. Such agreements also should be the basis for formal governance sanction. In the absence of such documentation, it is difficult to know later what the unit faculty as a collegium was endorsing when it gave its formal approval.

UNDERTAKING SELF-APPRAISAL

Securing documentation is half of the self-study task; the other half is performing the appraisal. From a knowledge base perspective, many faculty must share in conducting the appraisal, with ample provision for examination in terms of the different categories of expertise and perspective properly considered part of the larger teaching and teacher education professional collegium. The domains of expertise properly include the academic specialties (in professional education and in arts and sciences) and the worlds of professional practice, as well as the perspectives of members from different cultures.

In undertaking self-study, units may bring in persons from beyond the immediate setting. External consultants rarely should be relied upon for answers to internal needs; those are points that each unit has to devise for itself. What such persons can do, however, is provide information about how others have approached similar concerns. More important, they can provide assessments untainted by proximity or personal involvement. Exposure to perceptions of that kind can be invaluable.

An alternate approach to bringing in consultants is sending faculty and administrators out. The AACTE and NCATE workshops and orientations are examples. They provide opportunities for groups of faculty to work together on tasks structured according to the evolving understandings of those responsible for facilitating the professional aim of knowledge-based programs in the context of NCATE's new standards. The "curricula" of the workshop programs are only half the benefit; in addition, the opportunity to work with peers from different institutions expands the larger collegium

beyond that which can be acquired by bringing one or two external consultants to the local site.

External counsel is helpful, but it is no substitute for organizing internally to accomplish the continuing purpose of self-study. There are many indicated activities:

- The unit must assure that program evaluation studies are designed, conducted, and written up for later use.
- Appraisal tasks that can be undertaken individually must be distinguished from those that must be undertaken collaboratively. A rule of thumb is that collaborative attention should be reserved for assessment of the meaning of what is learned in self-study, for the identification of the assumptions and initial parameters for anticipated development tasks, and for review and approval of the final products of such development.
- Faculty retreats are useful instruments for purposes of collaborative review and generating options for consideration and/or development. Because of the brief span of time they typically occupy, they tend to be less useful for the actual work of development.
- Consideration must be given to the manner in which professional preparation programs are organized *between* the unit and other parts of the college or university (for general education, for specialty studies, and in those instances where professional preparation programs in education are housed outside the prime teacher education administrative unit) and *within* the unit, when instruction for the program is drawn from more than one of its parts. The organization question has at least three dimensions. The first has to do with program design and development. The second has to do with program administration. The third has to do with the obligation to achieve full congruence between a unit's own practices and the current state of knowledge pertaining to curriculum design, instruction, and evaluation.
- Units must address the means by which practitioner input (the wisdom of practice) can be brought to bear systematically on program design, administration, and review. Viable options include: membership on unit governance bodies (interest and commitment, however, may be hard to sustain over time); maintenance of standing program advisory committees (easier to maintain, but input is episodic); compensated involvement in ac-

tual program development and review work (incentive is present, but cost and perhaps limited numbers are potential drawbacks).

- Creation and use of a "bulletin board" technique for idea generation, analysis, and evaluation input. Large, sectioned boards permit more holistic thinking than sequential pages of print. They encourage simultaneous entertainment of alternative possibilities as well as indicators/contraindicators. All contributions should be initialed to discourage "wise-guy" entries and permit in-person, follow-up dialogue. If this technique is applied, the board should be accessible, the purpose for any given instance of its use clearly identified, and a timetable for its development and completion communicated to faculty.

During periods of intensive self-study and redevelopment, units might wish to consider attempting to identify a set time during the week that could be reserved by all faculty (until notice to relieve it), so that as tasks or meeting needs arise, availability virtually could be assured. Planning is necessary to create such an instrument, but its potential value should be apparent.

CONCLUDING COMMENTS

In undertaking self-study and program and institutional development, units must commit analyses and proposals to writing. The tracks that writing leaves encourage precision and reflection. They provide a focal point of debate and resolution that remains after the echoes of conversation have faded. They provide markers for purposes of continuity and accountability. Writing is the instrument by which evidence can be marshaled, the connective tissue of argument arrayed, and the quality of mind displayed. Writing, in sum, is the essential instrument for articulating the present condition of the intellectual underpinnings of the professional preparation enterprise. It is, therefore, the ultimate instrumentality of units that seek to create and demonstrate the essence of their foundation in knowledge.[1]

It is also worth repeating what was said in Chapter 3: Part of the evidence of a commitment to knowledge bases will be the presence of debate, argument, and struggle. Expect it. No unit that seeks to assure that its programs are grounded on and informed by knowledge will escape that struggle.

Finally, no worthwhile struggle in the realm of ideas can be launched or completed—at least to a point of temporary resolution—without the expenditure of valuable time. Self-study is time-consuming. Spirited and responsible battles among and between professional specializations and academic

disciplines take time. Experience tells us that program development consumes much more time and directed energy than the enabling inquiry preceding it. Having knowledge-based programs means making major commitments to resource investments at the front end of program delivery and administration, as well as sustaining a constant posture of reflectiveness that goes beyond that to which we in teacher education have been accustomed. Those are the contributions, however, that we in teacher education are uniquely situated to provide. It is the least we can expect of ourselves on behalf of the teaching profession.

NOTES

1 Apropos "writing things down," for powerful guidance to units needing to fulfill the requirements of Standard I.A: Design of the Curriculum, readers are referred to Edmund C. Short's recent article, "Curriculum Decision Making in Teacher Education: Policies, Program Development and Design," *Journal of Teacher Education*, vol. 38, no. 4 (July-August 1987): pp. 2-12. The article is not without its difficulties—it is very compressed, and its sections, at least to this reader, were out of sequence (the last one on the importance of a unifying concept should have followed the one on policy and preceded those on development and the importance of preparing a curricular document or plan). It is, however, full of ideas and contains a host of good citations; units would do well to assimilate its content deeply into their approaches to self-study and program development.

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APPENDICES

APPENDIX 1

Other NCATE Themes

The analysis in Chapter 3 demonstrates how the knowledge base theme permeates the standards. Three other themes can be identified that do the same—cultural pluralism, relationship to the world of practice (a family of standards in its own right), and resources (which also has a standard of its own). Consider—

CULTURAL PLURALISM

I.E: Content of the Curriculum—Professional Studies (especially criteria 22 and 23)
II.A: Clinical and Field-Based Experiences (especially criteria 24 and 27)
III.A: Admission (especially criteria 40, 41, and 43)
III.B: Monitoring Progress (especially criterion 45)
IV.A: Faculty Qualifications and Assignments (especially criterion 53)

Relationship to the World of Practice

II.A: Clinical and Field-Based Experiences
II.B: Relationships with Graduates
II.C: Relationships with Schools
and
I.A: Design of Curriculum (especially criteria 3 and 4)
I.B: Delivery of the Curriculum (especially criteria 6, 8, and 9)
I.D: Content of the Curriculum—Specialty Studies (especially criterion 13)
I.E: Content of the Curriculum—Professional Studies (all criteria)
II.B: Relationships with Graduates (especially criteria 33 and 35)
III.A: Admission (especially criterion 39)
III.D: Completion of Program (especially criterion 50)
IV.A: Faculty Qualifications and Assignments (especially criteria 55, 56, and 59)
IV.C: Faculty Development (especially criterion 64)
V.A: Governance (especially criterion 75)

RESOURCES

V.B: Resources
and
I.A: Design of Curriculum
I.B: Delivery of the Curriculum
I.C: Content of the Curriculum—General Education

I.D: Content of the Curriculum—Specialty Studies
I.E: Content of the Curriculum—Professional Studies
II.A: Clinical and Field-Based Experiences (especially criterion 26)
II.B: Relationships with Graduates (especially criteria 33 and 35)
II.C: Relationships with Schools (especially criteria 36, 37, and 38)
III.B: Monitoring Progress
III.C: Advisory Services
III.D: Completion of Program
IV.A: Faculty Qualifications and Assignments (all criteria)
IV.B: Faculty Load
IV.C: Faculty Development
IV.D: Faculty Evaluation

The usefulness of seeing these kinds of connections is, as in the case of the concept of knowledge bases (more fully illustrated in the text), that faculty, individual units, Boards of Examiners, and other NCATE officials can examine their responses or judgments for both consistency and comprehensiveness. If the "deep structure" of a unit's responses on a theme is fully mastered, it will manifest itself uniformly wherever the theme finds expression in the standards. Similarly, inconsistencies that might be found ought to lead to a more careful examination of the justifications for judgments that apparently are in conflict.

APPENDIX 2

Knowledge Base Exercises

On the following pages will be found a set of activities from which units may select those needed to help faculty and other participants in program development come to terms with the implications of knowledge based teacher education and, in particular, the NCATE standards. The purpose of each exercise is identified, as is a suggested duration.

EXERCISE 1

Purpose: To focus participants' attention on the NCATE knowledge base standards, especially those aspects of the standards that oblige unit faculty to exercise judgment.

Time: One and one-half hours.

Introduction

The redesigned NCATE accreditation process shifts from program to unit approval. The new standards rest on knowledge bases for the profession and the relationship to the world of practice.

The new NCATE procedures depend heavily on the exercise of professional judgment. Accreditation criteria that can be met on the basis of presence/absence assessments are to be addressed some 18 months before the prospective site visit. Those standards whose assessment depends on professional judgment will be evaluated on the basis of a narrative report and a site visit by five- to six-member teams drawn from the Board of Examiners.

Clearly, if determination of a unit's congruence with NCATE's standards requires the exercise of professional judgment, then unit and program achievement of that congruence entails its exercise as well.

Task

The small-group (six to eight members) task is:

1. Read the knowledge base standards closely.
2. Come to a consensus among yourselves on which terms and concepts faculty in a unit must exercise judgment (for example, "currency," "established," and so forth).
3. Picking a handful of the more important terms or concepts, identify the kinds of criteria[1] faculty might be expected to employ in formulating judgments in respect to each of those terms or concepts.

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[1] Note that the criteria referred to here are different from the criteria for compliance that key to standards, not to terms or concepts *per se*.

EXERCISE 2

Purpose: To provide experience with deliberating over a specific instance of the knowledge base in terms of which controversy exists and to consider the implications and meaning of different decisions that might be taken in respect to it.

Time: Up to one hour for Part 1, with an additional half-hour for Part 2.

Introduction

Read the Samuel S. Wineburg article, two responses, and rejoinder published in the December 1987, *Educational Researcher* on research pertaining to self-fulfilling prophecies. Assume that someone has proposed including material pertaining to teacher expectancy and self-fulfilling prophecies in your teacher education curiculum.

Task, Part 1

In a small group of six to eight, address the following matters:

1. Should knowledge from expectancy research be included in the teacher education program? If the answer is no, why not?

2. If the answer is yes, *which* knowledge should be included? Wineburg's view, Rist's and Rosenthal's, all three, or something else altogether? What is the rationale for your decision?

3. If the answer to the first question is affirmative, *how* should the knowledge be included? As content in its own right? As a rationale for something else that is done in the program? What would the latter mean?

Task, Part 2

When Part 1 is concluded or the time for it has elapsed, shift to a metadiscussion embracing the following kinds of questions:

1. What generalizations might you be willing to draw from this specific exercise about knowledge bases as underpinnings to programs? For example, what is likely to happen in units as knowledge base premises are vigorously asserted?

2. What kinds of skills must faculty display or acquire as they engage in such discussions?

3. What curricular review and accountability processes are implied?

4. What did the conversation suggest about the implications of collegial consideration of knowledge bases, especially where the claims to knowledge are either unsettled or characterized by controversy?

5. Would all participants in the conversation claim they understood *all* elements of the argument contained in the four articles? Is it even reasonable to expect such universal understanding? What, then, is the proper role of professional trust in knowledge base discussions? Under what circumstances? What are the safeguards?

6. How shall faculty understand or approach deference to expertise in fields other than their own?

EXERCISE 3

Purpose: To confront the scope, scale, and program implications of teaching's knowledge bases in the context of preparation of beginning teachers.

Time: Forty-five minutes to an hour.

Task

Scan the prospectus for the volume *The Knowledge Base for the Beginning Teacher* (Appendix 3). In a small group of six to eight, discuss the following questions:

1. To what degree are these domains now reflected in the teacher preparation programs with which you are personally familiar?
2. Presuming that some individual responses in the small group note lack of knowledge on the present circumstance, what does that suggest about the amount of collegial consensus currently existing?
3. Should every teaching candidate and every teacher educator possess a copy of this volume when it comes out? Why or why not? What would be the implications of all these individuals possessing the document?
4. Do the responses to this question suggest anything about our beliefs about teaching candidates' intellectual capacities, their interests, the usefulness of such a volume for curricular design purposes, the present capacity of schools as professional settings to allow utilization of knowledge, and so forth?

EXERCISE 4

Purpose: To clarify what *units* must do to meet knowledge base standards.
Time: One hour.

Introduction

NCATE's knowledge base standards apply to the unit; yet, it also seems clear that the ultimate test of the adequacy of the unit's concerns about knowledge bases will be the degree to which knowledge bases are reflected in programs.

Task

Working alone for the first 15 minutes, generate a list of concrete manifestations evidencing that the teacher education *unit* is committed to and keyed by knowledge considerations in its treatment of governance, management, quality control, and conceptualization of programs.

Share your list with a small group of six to eight others and see what kind of consensus emerges.

EXERCISE 5

Purpose: To become more familiar with the concept of program model(s) and implications of models for program conceptualization, development, and management.

Time: One hour.

Introduction

NCATE Standard I.A states:

> Each program in the unit reflects a systematic design with an explicitly stated philosophy and objectives. Coherence exists between (1) courses and experiences and (2) purposes and outcomes.

Criterion for Compliance #1 reads:

> The unit ensures that its professional education programs have adopted a model(s) that explicates the purposes, processes, outcomes, and evaluation of the program. The rationales for the model(s) and the knowledge bases that undergird them are clearly stated along with goals, philosophy, and objectives.

The NCATE glossary defines a *model for professional education* as:

> . . . a coordinated and articulated system or design for the preparation of professional personnel that has a knowledge base to support it. A professional education unit might adopt one or more models to undergird its programs. Models might be based on direct instruction, cognitive development, individual differences, cultural diversity, reflective teaching, effective schools, behaviorism, etc.

Task

First, complete the following opinionaire:

1. My unit is in compliance with this standard.
   Y N
2. The program(s) for which I share curricular, instructional, advising, and evaluative responsibilities is in compliance.
   Y N
3. I don't know if my unit (or my program[s]) is in compliance.
   Y N
4. In order for this standard to be met, more than a listing of knowledge, skills, attitudes, and values is required.
   Y N

5. Realistically, this obligation can apply only to those portions of the program for which we in the department are responsible.

Y N

6. Professionally, we must understand this obligation to embrace all the components for which we in the *unit* are responsible.

Y N

7. Responsibility for defining a model extends beyond the faculty in this part of the unit.

Y N

8. This standard will require discussion and collaboration among diverse parts of the college beyond anything we have experienced.

Y N

9. Real struggles are likely to occur.

Y N

10. Our programs are likely to be far more cohesive and coherent once the struggles are over and consensus is achieved.

Y N

11. I have thought little up to now about what kinds of criteria I would be willing to apply to the achievement of consensus about model(s).

Y N

12. Turf is not a relevant criterion in coming to consensus, for others or myself.

Y N

13. In and of itself, length of service is not a criterion.

Y N

14. The collegial and collaborative dimensions of our professional, collective commitment to knowledge bases are where the criteria for consensus will come from.

Y N

15. There is no model without the existence of a comprehensive curriculum document for each program which articulates and organizes program purpose, definition of professional role, goals and objectives, sequence, instructional process, formative and summative evaluation design, and so forth. Without such a document there is no accountability of faculty to one another, to our students, or to the larger profession.

Y N

16. Collaboration does *not* mean automatic deferral to another's claims of expertise.

Y N

Having completed your responses to these items, now engage in a conversation with a half-dozen of your colleagues on the meaning and implications of key terms in Standard I.A, especially terms like "systematic design," "model," "coherence," "rationales," "complement," "reflected," and so on. Try not to depend on the assertions above as a structure for the discussion. They are intended only as a stimulus to thought, as a conversation-starter, not to serve as a strict framework for your dialogue.

EXERCISE 6

Purpose: To explore the implications of Standard I.B pertaining to full congruence between knowledge bases and a unit's curricular designs and instructional and evaluation practices.

Time: One hour.

Introduction

NCATE Standard I.B reads:

> The unit ensures that knowledge bases and best practice in professional education are reflected in the instruction offered. The instructional practices and evaluation are fully congruent with the current state of knowledge about curriculum design, instruction, and evaluation.

Task

First, indicate to yourself whether you agree with the assertions listed below :

1. A rigorous, professional instructional quality-control mechanism is needed to assure fulfillment of the above standard and is in place in my unit.

   Y N

2. The standard is currently being met, but we will need to develop a statement organizing and presenting current activities.

   Y N

3. This standard may prove to be the single most-important lever for effecting reform in teacher education if it is seriously acted upon.

   Y N

4. I am prepared (including learning how, if necessary) to modify my instructional practices in order to meet the standard.

   Y N

5. If approaches to teaching are examined and some of us are asked to modify ours as a consequence of the application of this standard, I believe some may claim infringement of the principle of academic freedom.

   Y N

6. This standard should apply to all instruction our students receive—general education, subject matter, and professional content.

   Y N

7. Realistically speaking, we can assure compliance only for that which is within the purview of the professional unit of which we are a part.

Y N

8. Notwithstanding what is realistic, we also should undertake initiatives to carry the instructional development theme to our peers in arts and sciences, either directly or by pressing for the creation of a university presence (in which we in teacher education could expect to be deeply involved) that would have, as its aim, achieving "full congruence" between knowledge of the state of the art instructionally and universitywide instructional practices.

Y N

9. The quality of instruction is not just an individual matter, but a collegial and programmatic responsibility in which we all must play important roles.

Y N

10. I experience some sense of discomfort now that I have read all this.

Y N

Now that you have considered your reactions to the above assertions, participate in a discussion of the following points:

1. To what degree is the prescription to practice what we preach derived from the commitment to knowledge bases? From which ones? To what degree is it derived from professional values, and, if so, from which ones?

2. What is your assessment about the degree of difficulty that will be encountered in meeting Standard I.B, and what are the sources of that difficulty?

3. Develop a list of steps that might be taken to begin to fulfill this standard.

4. Prioritize the list and give reasons for the order you arrive at.

EXERCISE 7

Purpose: To explore the development of full-blown curriculum statements as vehicles for interrelating the aims of reflecting knowledge bases, explicating models, and establishing frameworks for program evaluation studies.

Time: One hour.

Introduction

Consider the following proposition: If only teacher education units, as one manifestation of their practicing what they preach, would develop thoroughgoing curriculum statements or documents for each of their programs, many of the key knowledge base and related standards could effectively be interrelated with one another. Such documents would have to focus on the requirements for "models" and explicated knowledge bases and would serve as vehicles for the manifestation of key terms such as "systematic design," "coherent," "evaluation," and "full congruence."

Task

With a group of six to eight, discuss:

1. What would such a document look like?
2. What would it take to develop one?
3. How might it bear on governance approval processes?
4. What are the implications of its existence for faculty accountability to students, programs, and profession?
5. What will it take to assure that the document is an accurate reflection of the program it purports to describe?

EXERCISE 8

Purpose: To explore the more significant interrelationships between other NCATE standards and the knowledge base standards.

Time: One hour.

Introduction

A teacher education unit's commitment to knowledge bases will be manifested through behaviors and conditions that are assessed in standards other than the knowledge base standards per se.

Task

In a small group consider:

1. Which of those standards are implicated?
2. Which are the most important in that regard, and why?
3. What kind of interrelationships should units be looking for?

EXERCISE 9

Purpose: To stimulate consideration of the active, dispositional dimensions of commitment to knowledge based programs.

Time: One hour.

Introduction

Commitment to knowledge bases is not merely situational; it is also dispositional. It is to be found in the circumstances of curricular and instructional definition at a given point in time and also in the activities and motivations of the faculty, in the orientations they display toward what they are doing. In summary, commitment to knowledge bases is a commitment to knowing, and therefore, to curiosity, healthy skepticism, and an insistence upon action that is both logical and evidentiary in its basis. It implies a commitment to change.

Task

In small group, consider:

1. To what unit characteristics should teacher educators look for evidence of the active dimensions of a commitment to knowledge bases?
2. What impediments stand in the way of achieving that state of affairs?
3. What can be done to overcome those impediments?

EXERCISE 10

Purpose: To examine the differences and affinities of the concept of knowledge based programs, as compared to those bearing a close relationship to the world of practice.

Time: One hour.

Introduction

Imagine that a teacher education unit designed a teacher education program that was geared to a sequenced series of extensive and intensive clinical experiences.

Task

In a small group of six to eight members, consider the following questions:

1. Could the unit's claim that its program was based on the knowledge the students thus acquired of the reality of practice fulfill NCATE's knowledge base Standard I.A?
2. Why or why not?
3. What are the implications of such a posture for the selection of practicum settings? For faculty knowledge of school settings? For developmental preparation of cooperating teachers?

EXERCISE 11

Purpose: To consider organizational implications of the knowledge base standards.

Time: One hour.

Introduction

Especially in large teacher education units, departmentalization has created status hierarchies and other barriers to achieving the kind of conceptually integrated, coherent knowledge based programs called for by NCATE's standards.

Task

In a small group of six to eight, consider the following questions:

1. What are those obstacles?
2. Which have legitimacy and which do not?
3. What are workable strategies for overcoming organizational impediments that exist?

APPENDIX
3

Prospectus for *The Knowledge Base for the Beginning Teacher*

Preface
William E. Gardner, University of Minnesota

Chapter I
Explanations in Education
Frank Murray, University of Delaware

Chapter II
Structuring Knowledge for Beginning Teaching
Henrietta Barnes, Michigan State University

Chapter III
Teachers of Substance: Subject Matter Knowledge for Teaching
Pamela Grossman, University of Washington; Suzanne Wilson, Michigan State University; and Lee Shulman, Stanford University

Chapter IV
Conceptions of Teaching and Approaches to Core Problems
Marlene Scardamalia and Carl Bereiter, Ontario Institute for Studies in Education

Chapter V
Principles of Sociology and Anthropology: Context, Code, Classroom and Culture
Courtney Cazden, Harvard University, and Hugh Mehan, University of California-San Diego

Chapter VI
Classroom Organization and Management
Carolyn Evertson, Vanderbilt University

Chapter VII
Teaching Students To Assume an Active Role in Their Learning
Margaret Wang, Temple University, and Annemarie Palinscar, Michigan State University

Chapter VIII
Learners and Learning
Linda Anderson, Michigan State University

Chapter IX

Classroom Instruction

Linda Anderson, Michigan State University

Chapter X

Knowledge of the Learner: The Development of Children's Concepts of Self, Morality and Societal Convention

Larry Nucci, University of Illinois-Chicago

Chapter XI

Students With Special Needs

Maynard Reynolds, University of Minnesota

Chapter XII

Social and Political Contexts

Maxine Greene, Columbia University

Chapter XIII

The School District: A Unique Setting

Don McCarty, University of Wisconsin-Madison

Chapter XIV

Social Organization of Classes and Schools

Susan Florio-Ruane, Michigan State University

Chapter XV

Beginning Professional Teachers: The Need for a Curricular Vision of Teaching

Karen Zumwalt, Columbia University

Chapter XVI

Evaluation

Jack Merwin, University of Minnesota

Chapter XVII

Why Staying One Chapter Ahead Doesn't Really Work: Subject-Specific Pedagogy

William McDiarmid, Deborah Ball, and Charles Anderson, Michigan State University

Chapter XVIII

Knowledge About Reading and Writing

Michael Graves and Gene Piche, University of Minnesota

Chapter XIX

Knowledge, Representation, and Quantitative Thinking

Thomas Post, University of Minnesota, and Kathleen Cramer, University of Wisconsin-River Falls

Chapter XX

Meeting the Developmental Needs of Pupils: Toward Effective Classroom Guidance

Norman Sprinthall, North Carolina State University

Chapter XXI

Professional Communication and Collaboration

Jane Close Conoley, University of Nebraska-Lincoln

Chapter XXII

Legal Rights and Responsibilities of Public School Teachers

Martha McCarthy, Indiana University

Chapter XXIII

The Ethical Dimension of Teaching

Sharon Strom, University of Minnesota

Chapter XXIV

Coda: The Knowledge-driven School

Gary Griffin, University of Illinois-Chicago

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